Transportation Library

MAY 3 1950

RAILWAY AGE

FREIGHT TRAFFIC ISSUE

APRIL 22, 1950

NO OTHER BEARING WITH SO MUCH TO OFFER!

1 Rolls are "made for each other"! The rolls of a Timken tapered roller bearing are uniformly sized for their particular cup and cone, thanks to precision manufacture. Bearings last longer because each roll carries its full share of the load.

2 No lateral sliding friction in a Timken bearing, due to its tapered design.

3 Rolls stay put . . . for life! The rolls in a Timken tapered roller bearing are permanently retained in the bearing assembly. Can't fall out and pick up dirt during bearing changes.

4 Hard on the outside—tough on the inside! Rolls and races made of Timken fine alloy steel with wear-resisting surface and tough, shock-resistant core.

5 No special thrust blocks needed. Timken bearings take *both* radial and thrust loads!

6 Use either oil or grease!

7 No roll skidding or skewing! Cone rib keeps tapered rolls in positive alignment. Load is spread over full roll length.

8 No adjustments needed when wheel and axle assembly are installed in the truck.

9 Axle magnaflux inspection simplified! Bearings press off with the wheel.

10 Polished axle ends aren't necessary! No thrust block used.

11 Special axle length tolerances not required!

NO OTHER BEARING SO FULLY PROVED!

USED ON OVER 5,000 PASSENGER CARS, OVER 6,000 STEAM, DIESEL AND ELECTRIC LOCOMOTIVES, 3,900 FREIGHT CARS!

Pioneer anti-friction bearings for railroads, Timken has remained the leader ever since.

The advantages of Timken bearings have been conclusively proved in every type of railroad operation. Over 5000 passenger cars roll on Timken bearings—more than on any other make of anti-friction bearing. Over 3500 freight cars roll on Timken bearings—more than on any other make of anti-friction bearing. Over 4000 steam locomotives roll on Timken bearings—more than on any other make of anti-friction bearing.

Let us help you with your bearing applications. The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

TIMKEN

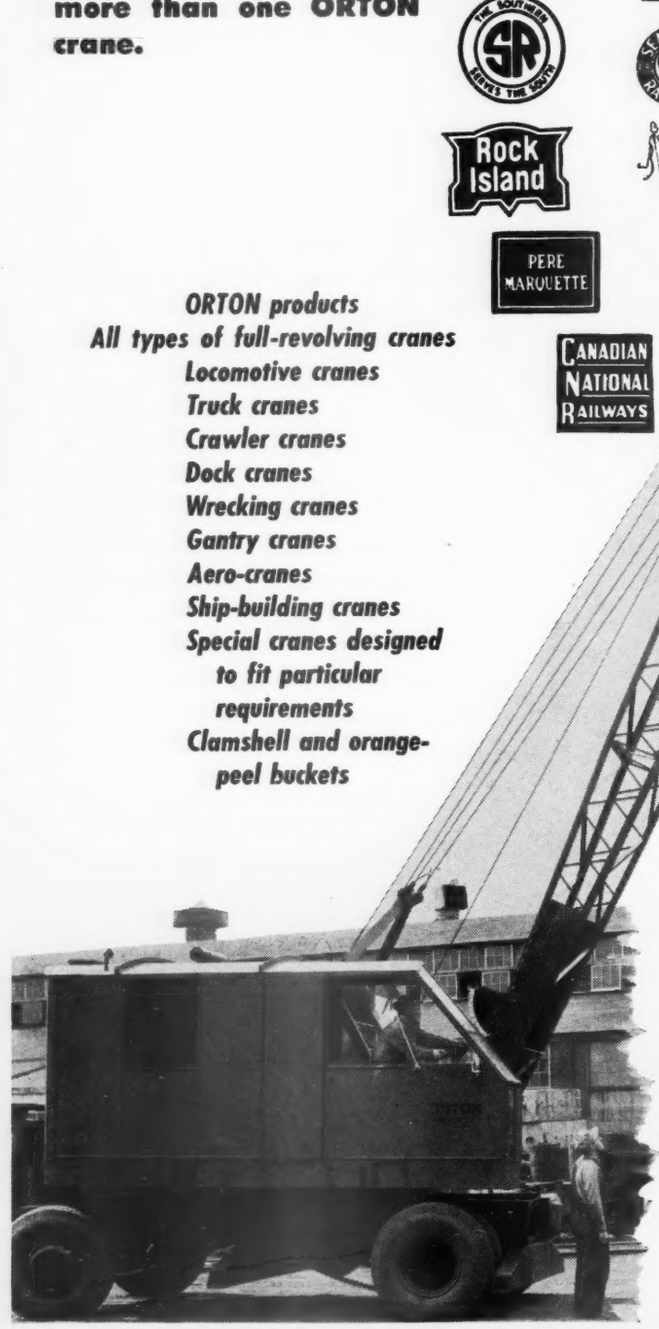
TRADE MARK REG. U.S. PAT. OFF.

TAPERED ROLLER BEARINGS

NOT JUST A BALL · NOT JUST A ROLLER · THE TIMKEN TAPERED ROLLER BEARING TAKES RADIAL AND THRUST LOADS OR ANY COMBINATION

the best circles

In the best railroad circles ORTON cranes are well known by their work, — raising hoisting efficiency and lowering costs on the job. The 28 leading roads represented here are among those owning and operating more than one ORTON crane.



ORTON products
All types of full-revolving cranes
Locomotive cranes
Truck cranes
Crawler cranes
Dock cranes
Wrecking cranes
Gantry cranes
Aero-cranes
Ship-building cranes
Special cranes designed to fit particular requirements
Clamshell and orange-peel buckets

ORTON representatives in principal cities are always ready to help with your crane problems. Consult them.

ORTON EXPERIENCE

ORTON

CRANE & SHOVEL CO.

608 SOUTH DEARBORN STREET

CHICAGO 5

Published weekly by Simmons-Boardman Publishing Corporation, Orange, Conn. Executive Offices, 30 Church Street, New York 7, N. Y. Entered as second class matter at Orange, Conn., under the act of March 3, 1879. Subscription price $6.00. for one year, U. S. and Canada. Single copies, 50 cents each. Vol. 12 No. 16.

Vol. 128, No. 16 April 22, 1950

RAILWAY AGE

With which are incorporated the Railway Review, the Railway Gazette, and the Railway-Age Gazette. Name Registered in U. S. Patent Office and Trade Mark Office in Canada.

Published by
SIMMONS-BOARDMAN
PUBLISHING CORPORATION
The House of Transportation
and Building

Publisher of
Railway Age
Railway Engineering & Maintenance
Railway Mechanical & Electrical Engineer
Railway Signaling & Communications
Car Builders' Cyclopedia
Locomotive Cyclopedia
Railway Engineering &
Maintenance Cyclopedia
American Builder
Marine Engineering &
Shipping Review
Marine Catalog & Buyers' Directory
Books covering transportation
and building

Office of Publication, Orange, Conn. Editorial and Executive Offices at 30 Church Street, New York 7, N. Y., and 79 West Monroe Street, Chicago 3, Ill.

Washington 4, D. C.: 1081 National Press Building—Cleveland 13: Terminal Tower — Seattle 1: 1914 Minor Avenue—Los Angeles 17: 816 West Fifth Street—Dallas 4: 2909 Maple Avenue.

Samuel O. Dunn, Chairman. James G. Lyne, President. J. S. Crane, Vice-President and Secretary. C. Miles Burpee, Harry H. Melville, C. W. Merriken, John R. Thompson, R. E. Thayer, H. E. McCandless, Vice-Presidents. J. T. DeMott, Treasurer. Ralph E. Westerman, Arthur J. McGinnis, Assistant Treasurers.

Subscriptions: including 52 regular weekly issues, and special daily editions published from time to time in New York or in places other than New York, payable in advance and postage free — United States, U. S. possessions and Canada: 1 year, $6.00; 2 years, $10.00; other countries not including daily editions in Western Hemisphere: 1 year, $10.00; 2 years, $16.00; other countries: 1 year, $15.00; 2 years, $25.00. Single copies, 50 cents each, except special issues.

H. E. McCandless, Circulation Manager, 30 Church Street, New York 7.

Railway Age is a member of Associated Business Papers (A. B. P.) and Audit Bureau of Circulation (A. B. C.) and is indexed by the Industrial Arts Index and by the Engineering Index Service. Published each Saturday by the Simmons-Boardman Publishing Corporation, Orange, Conn. Printed in U. S. A.

IN THIS ISSUE

EDITORIALS:

The Power of the Shippers 35
Sharing the Cost of "Device Cars" 36
Report from Labor 37

FREIGHT TRAFFIC SECTION:

Union Pacific Builds Up Traffic With a Fast Livestock Train 40
"Shippers' Delight" Box Car 43
Power Conveyor at Atlanta Express Terminal Speeds Shipments 46
Highlights of the Railroad Situation 48
New Traffic for the Atlantic Coast Line 50

GENERAL ARTICLES:

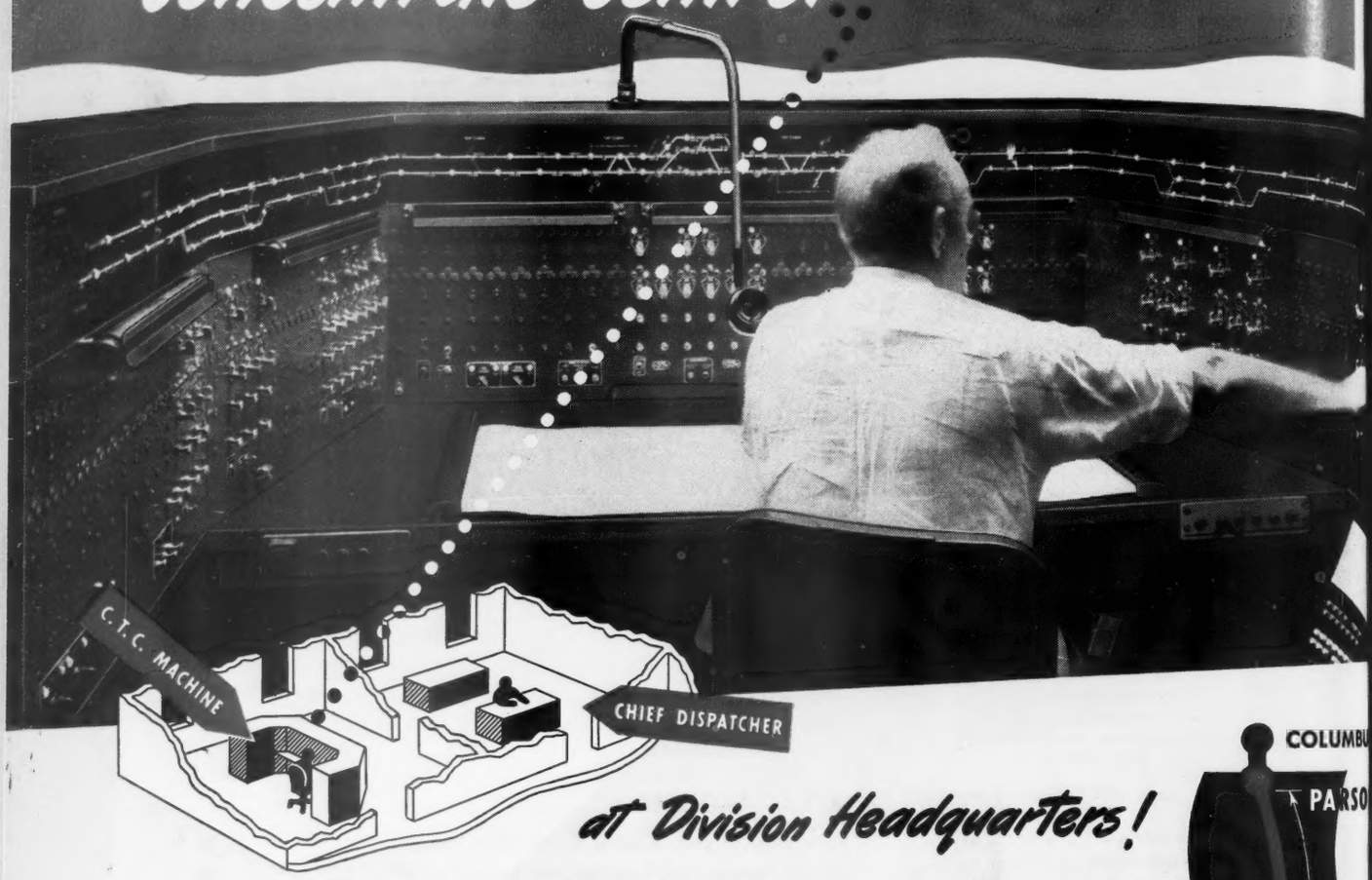
Economics of Diesel-Electric Multiple-Unit Trains, by H. Bleibtreu .. 52
26,563 Freight-Train Cars Reported Ordered in 1950 58
Six Years of Vapor-Dried Ties, by C. Miles Burpee 59

GENERAL NEWS 63

CURRENT PUBLICATIONS 84

"UNION" SYSTEMS ON THE *concentrate control*

C AND O FOR PROGRESS

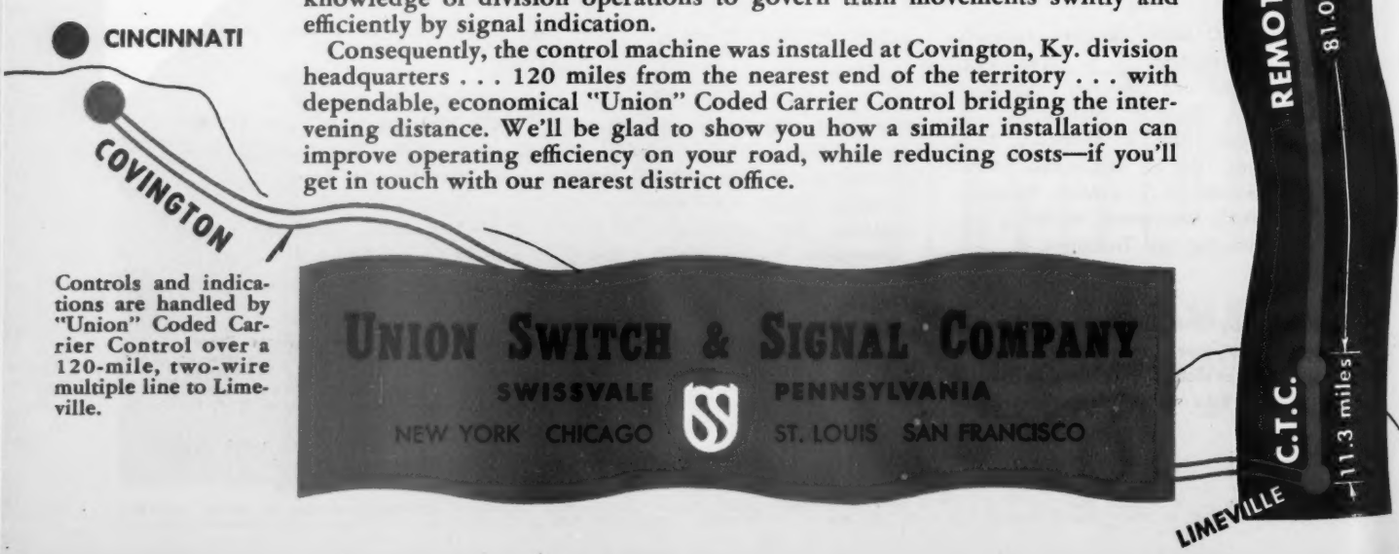


at Division Headquarters!

The Limeville, Ky. to Parsons, Ohio territory of the Chesapeake and Ohio Railway Company consists of: (1) C.T.C. from Limeville to Wheeler, Ohio, 11.3 miles of two-track territory with either-direction running on both tracks, and; (2) remote control of switches and signals at the ends of sidings from Wheeler to Parsons, 81 miles of two-track territory with single-direction running.

From previous experience with *concentrating control at division headquarters,* the C & O recognizes that the maximum benefits result—from a modern method of train operation such as this installation provides—when the control machine is installed where the personnel can best utilize their overall knowledge of division operations to govern train movements swiftly and efficiently by signal indication.

Consequently, the control machine was installed at Covington, Ky. division headquarters . . . 120 miles from the nearest end of the territory . . . with dependable, economical "Union" Coded Carrier Control bridging the intervening distance. We'll be glad to show you how a similar installation can improve operating efficiency on your road, while reducing costs—if you'll get in touch with our nearest district office.



Controls and indications are handled by "Union" Coded Carrier Control over a 120-mile, two-wire multiple line to Limeville.

UNION SWITCH & SIGNAL COMPANY

SWISSVALE PENNSYLVANIA

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

WEEK AT A GLANCE

FEATHERBED STRIKE: As reported in the News pages of this issue, "Davy" Robertson, 74-year-old president of the Brotherhood of Locomotive Firemen & Enginemen, has announced that his union will strike next week for a second fireman on the railroads' fireless Diesels. Mr. Robertson told the press he is confident that the engineers and other operating employees will honor his picket lines. *We* are not so sure! But we are very sure that the strike is in clear violation of the spirit of the Railway Labor Act, and that it represents extremely shortsighted—not to use a stronger term—policy on the part of the brotherhood. For if the strike should succeed it will deprive railroads of most of the benefits of Dieselization. And loss of those benefits means higher costs, less ability to meet competition, more traffic diversion to subsidized agencies of transportation—in short, fewer rather than more jobs for all railroad men, including firemen. We wonder, incidentally, how the firemen would like to work for the government, where one man, by a stroke of his pen, can abolish thousands of jobs—as was done this week in the Post Office Department. That could happen to railroad employees too, if the B. of L. F. & E. persists in such absurd and selfish demands, already rejected by Presidential boards.

NEWS NOTES: March revenues slightly higher than last year.—N.&W. holds 25th Better Service meeting.—I.C.C. "Monthly Comment" (page 63) shows railroads 14 times safer than air lines.—Boston & Maine and Bangor & Aroostook reorganization plans approved.—Knudson confirmed for I.C.C.; Edwards appointed to National Mediation Board.—Railroads continue testimony before Senate subcommittee.

LOCOMOTIVE LEASING: Several railroads are reported to be investigating the possibility of leasing Diesel locomotives under arrangements similar to those recently announced for freight cars by the Equitable Life Assurance Society, stockholders of the American Locomotive Company were told at their annual meeting on April 18. Discussions, however, are said to be still in the preliminary stage, with details yet to be worked out.

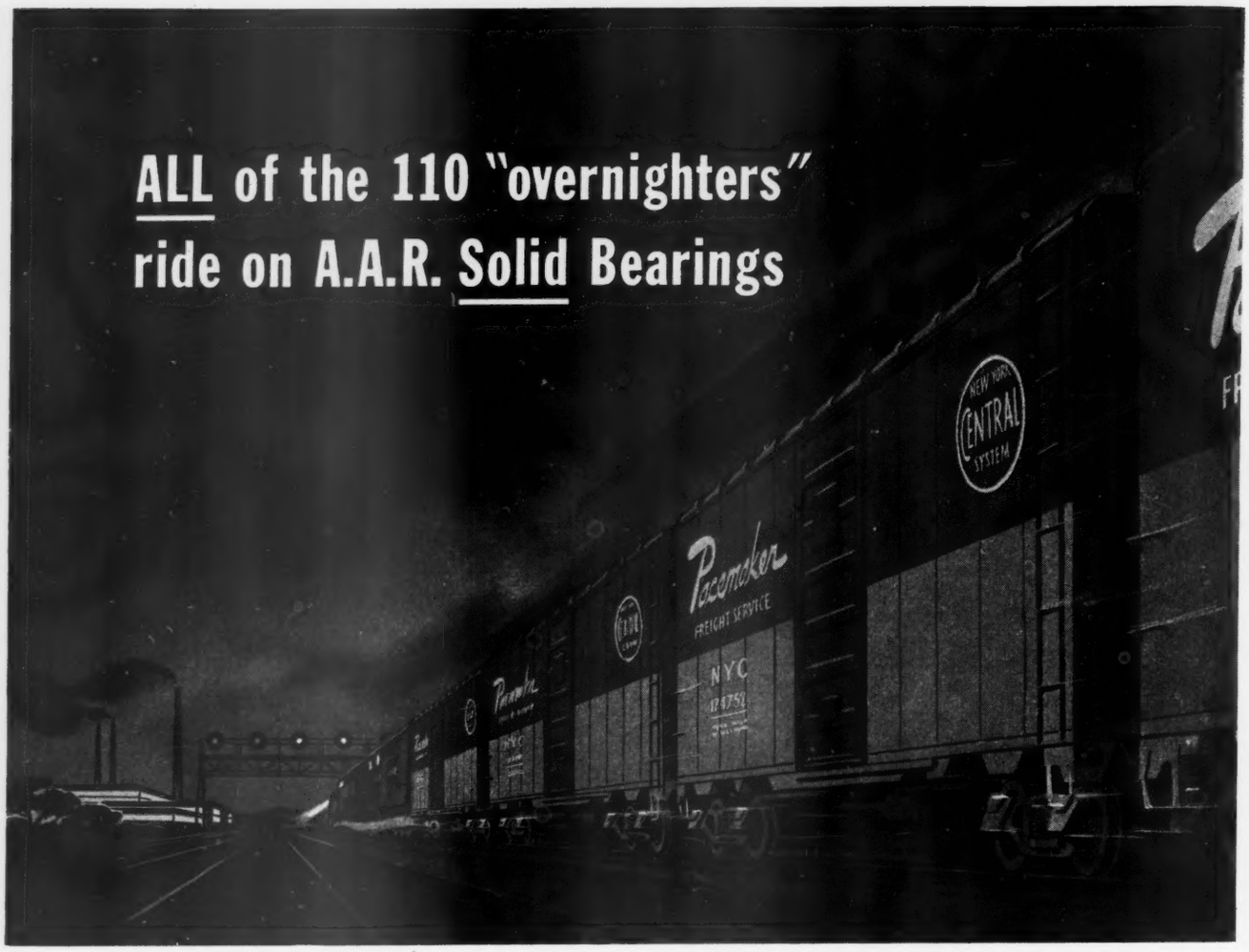
BLEEDING HEARTS: One of the most shopworn theme songs of propagandists for commercial highway and inland waterway carriers is that they have helped reduce freight rates by setting up competition for the railroads. (No mention, of course, is made of the fact that truck and inland water transport both involve an increase in *total* transport costs, with the difference between cost and rates being saddled on the long-suffering but unorganized taxpayers.) But when the self-supporting, taxpaying railroads want to offer lower rates to shippers the truck and waterway propagandists pull out all the stops and go to town. Then the propagandists' hearts bleed indeed—for the trucks and water lines. There's a good example of such tactics in our News report of I.C.C. hearings on the eastern railroads' proposal to reduce iron and steel rates—a proposal which the truckers oppose despite the fact that they can't legally carry the 80,000 lb. minimum payloads on which the new rail rates would be based and which the water lines oppose for no apparent reason except that they might get less traffic while the shippers got better service. It looks as though the truck and barge boys aren't quite so keen about competition when they are on the receiving end.

"SHIPPERS' DELIGHT": Most of the country's major railroads are giving detailed study to a brand-new lease arrangement, the effect of which would be to make available to shippers a versatile box car equipped with the Evans "Damage-Free" loading device and many other design and specialty features for shock-proof, high-speed transportation. Economics of the new GAEX car, 25 of which are now under construction by the General American Transportation Corporation, are discussed in the illustrated feature article beginning on page 43. A complete mechanical description will also appear in an early future issue.

WHAT CAN BE DONE: A graphic example of what the railroads can do when conditions are right is described in the article which starts on page 40. Told there is the story of the Union Pacific's DLS, or Day Light Stock train, which covers the 784 mi. of mountain and desert terrain between Salt Lake City and Los Angeles at almost passenger-train speed, without stops for either food or water. Perhaps the most significant aspect of the whole story are the figures showing the increase in traffic handled on the train. Service like that, apparently, is one way not only to meet, but to beat, truck competition.

VISUAL PROOF: As *Railway Age* has frequently pointed out, the railroads' difficulties are due in large part to the fact that wartime and postwar increases in wages and material costs have far outstripped contemporary increases in rates and fares. This was graphically demonstrated recently to a Senate subcommittee on transportation by A.A.R. Vice-President J. H. Parmelee; some of the charts which he used for that purpose are reproduced on page 49. Other charts, on page 48, show the extent to which the railroads have gone in helping themselves by reducing their funded debt and fixed charges.

SUBURBAN COST ANALYSIS: Emphasis in this issue is largely on freight traffic—but on page 52 is a comprehensive discussion, with detailed statistics, of the costs of providing suburban passenger power with standard steam- and Diesel-powered trains, and with Diesel-powered motor trains. H. Bleibtreu, consulting engineer of Pullman-Standard's Research and Development division, is the author. Another article not directly related to freight traffic is the description of the reorganization of Taylor-Colquitt's Spartanburg, S. C., wood-preserving plant, which points to the wider application of the vapor-drying process (page 59).



—with an unequalled record of high speed performance!

TAKE THE "PACEMAKER" FOR EXAMPLE:

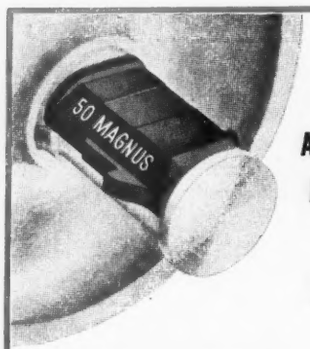
In one period of slightly more than a year, the New York Central System's 917 Pacemaker cars traveled over 42,000,000 car miles without a hot box. Since placed in service these same cars have averaged better than 17,000,000 car miles per hot box.

All of these cars use standard A.A.R. solid journal bearings, but otherwise have been specially designed for modern, fast-freight lcl service. They are "on-line" rolling stock, and are never "humped."

From all available authentic data, this is the best performance record for any type of bearing — in freight or passenger service. It shows what the simple, one-piece, solid bearing can do under favorable operating conditions — and at lowest possible cost.

Write for additional data

MAGNUS METAL CORPORATION
Subsidiary of
NATIONAL LEAD COMPANY
New York, Chicago



Here's why America's Railroads have standardized on solid journal bearings

MAXIMUM DEPENDABILITY: In daily operating service, an unequalled record for bearing assembly performance.

SMOOTHEST RIDING QUALITIES: Lateral shocks are flexibly controlled — not rigidly opposed.

LOWEST ACCELERATING AND RUNNING RESISTANCE: Glides on a single film of oil, like a skater on ice.

EASE OF MAINTENANCE: Can be fully inspected or replaced on the line in about 10 minutes. No shopping required.

UNIVERSAL INTERCHANGEABILITY: Simple — dependable — economical — safe.

LIGHT WEIGHT: Saves more than 100,000 lbs. dead weight per hundred-car train.

ROCK BOTTOM COST: Saves over 25% on initial *car* cost — 96% on bearing replacement.

RAILWAY AGE

PUBLISHER . . .
Samuel O. Dunn

EDITOR . . .
James G. Lyne

MANAGING EDITOR . . .
C. B. Tavenner

WESTERN EDITOR . . .
William H. Schmidt, Jr.

NEWS EDITOR . . .
Gardner C. Hudson

WASHINGTON OFFICE . . .
Walter J. Taft
Joe W. Kizzia

ELECTRICAL DEPARTMENT . . .
Alfred G. Oehler

TRANSPORTATION DEPARTMENT . . .
Robert G. Lewis

MECHANICAL DEPARTMENT . . .
C. B. Peck
E. L. Woodward
H. C. Wilcox
C. L. Combes
G. J. Weihofen

ENGINEERING DEPARTMENT . . .
M. H. Dick
Walter L. Turner, Jr.
Henry E. Michael
Norris V. Engman
Radford E. Dove

PURCHASES & STORES DEPARTMENT . . .
John W. Milliken

EQUIPMENT & FINANCIAL NEWS . . .
Fred C. Miles

SIGNALING AND COMMUNICATIONS DEPARTMENT . . .
John H. Dunn
Maurice Peacock

ASSOCIATE EDITOR . . .
Charles Layng

LIBRARIAN . . .
Edith C. Stone

EDITORIAL ASSISTANT . . .
Elaine C. Farrar

THE POWER OF THE SHIPPERS

The future of the railways and all other carriers of freight will be determined principally by the shippers. The shippers are now determining, and will continue to determine, the division of freight between carriers by rail, highway, water and air. They thus determine the volume of traffic and the earnings of each of these classes of carriers.

Nobody criticizes a shipper for using the kind of carrier that gives him the best terms, both rates and service considered. But the service and rates a carrier can now give are not determined entirely by natural *economic* conditions. They are now determined very largely by conditions created by politics—by the way the carrier is regulated by government and by whether it receives, directly or indirectly, a subsidy from government. And the shippers of the country, although not a numerous body, have potentially enough influence to cause whatever changes should be made in the *political* factors that now so largely determine the conditions under which the different classes of carriers compete for freight and the competitive service and rates they can give.

Potential Influence

The statement that shippers have potentially this much influence may seem a strong one, especially to shippers themselves. But this paper is sure that neither the shippers nor anybody else realizes the power of the shippers to influence and change the vitally important government policies that so largely determine conditions under which the different classes of carriers handle freight.

A most important illustration of the influence the shippers can exert seems to have been pretty generally forgotten. When government operation of railroads was adopted at the beginning of 1918 during World War I almost nobody doubted that that was the end of private operation. Who mainly caused restoration of private operation two years later? The shippers. The power of the railway labor unions was greatly increased under government operation, and they favored continuance of government operation. But the shippers of the country, large and small, were virtually unanimous in expressing dissatisfaction with government operation and demanding restoration of private operation; and their influence with Congress was so great that it swept aside all opposition.

Shippers have so much influence largely because they are located in every community, and are men of importance in every community in which they are located. Most of them are right down at the "grass roots" where the politics and politicians of the country are made. Anybody who doubts this should read a list of the postoffice addresses of members of the National Industrial Traffic League and of the regional Shippers' Boards. In addition, those directly concerned with the shipping of freight

know transportation conditions and services, and government policies affecting them, and can write and talk intelligently and impartially about them—a great advantage in trying to influence public opinion or government action.

Are shippers satisfied with present conditions and trends in freight transportation and the use or non-use that shippers are making of their potential influence? We believe that almost every thoughtful shipper in the country would answer in the negative. We believe the shippers are even more strongly opposed to government ownership now than they were thirty years ago when, after World War I, they furnished the principal influence that caused the railways to be restored to private operation. Nevertheless almost all thoughtful shippers must realize that the entire transportation system of the country—carriers by highway and water as well as by rail—is drifting toward government ownership.

One Shipper's Views

What should shippers do about this? Shippers use all the means of freight transportation, including in many instances their own barges on the waterways and their own trucks on the highways. *Railway Age* is devoted solely to transportation by railroad. Hence, many shippers would not be likely to receive gladly the views of this publication regarding their duty and injunctions to perform it. Doubtless they would feel differently about information, views and advice from important shippers. Hence, this paper ventures to recommend strongly to those who have not read it, the recent address of J. G. Phelps, vice-president of the Westinghouse Electric Corporation, entitled "Transportation by Taxation," an extended abstract of which was published in *Railway Age* of March 25, and which is now available in pamphlet form. While *Railway Age* may differ with Mr. Phelps in some particulars, this paper has no hesitation in saying that his address is one of the ablest on the nation's present transportation problem ever prepared by a railway officer, by a shipper or by anybody else.

Without presuming to try to tell shippers their duty and how to perform it, *Railway Age* does venture to say to them that, in their own self-interest, they should all take a long look ahead to see where all of us are drifting; and should use their great influence to change all policies, governmental or otherwise, that are causing the prevailing trend toward government ownership and operation of the entire transportation industry. What are these policies? Intelligent shippers are just as competent, or more competent, to answer that question than *Railway Age*. One thing seems certain. Adequate development and improvement of the service of the railways to shippers are impossible under private ownership with such net earnings as the railways have made since the war. Who and what are responsible for these low earnings? That is another question that intelligent shippers are quite as competent to answer as *Railway Age*.

The shippers know what they want from the railways. They want private ownership and management, good service and the lowest rates consistent with good service. But if these things are to be had, policies affecting the railways must make them possible, and only shippers have the potential influence necessary to cause adoption of the government policies regarding regulation and subsidy necessary to making them possible. Most of the policies now determining the conditions under which competition in transportation is carried on were adopted because of the influence of the shippers; and the same influence that caused their adoption can cause their modification.

It would plainly be in the long-run interest of the shippers to have equality of opportunity in the competition of the different classes of carriers for freight, because (1) only competition under equality of opportunity can cause each carrier to give to shippers the best terms in both service and rates of which it is economically capable, and (2) the giving of the best terms in service and rates of which they are capable will afford the best possible protection of the carriers as a whole from socialization.

SHARING THE COST OF "DEVICE CARS"

The future of the *quality* as well as the quantity of the railroads' freight car fleet may be favorably affected if certain plans for leasing cars, now under discussion, turn out to be practicable. The proposals have aroused great interest among shippers, financial houses and the railway suppliers as well as railroad officers themselves.

The Equitable Life's plan for long-term leases of all types of freight cars (described in the April 1 issue of this paper) does not, of itself, contemplate supplying the roads with rolling stock of design or fittings different from those they would buy for themselves. The plan has the object, chiefly, of enabling railroads to augment their car supply without dangerous commitment of funds present or future. Its principal effect would be to increase the car supply. But it follows that even a temporary easing of the railroads' difficulty in paying for new rolling stock would provide shippers with a greater number of modern cars than now exist. This modernity of itself should afford shippers the blessings of "the three freedoms"—freedom from contamination, from damage en route, and from "bad

order" delays. Further, since the financing organization itself is to order and own the cars, and since the latter are its sole security, it is logical that it will see to it that its cars are of the latest design so they will be sought eagerly by the majority of carriers.

The General American-Evans proposal for long-term leasing of "Damage-Free" box cars, described on another page in this issue, is intended by its sponsors to enable railroads to furnish to certain classes of shippers cars which will reduce the need for expensive blocking and bracing, ease their loading problems and—by the use of advanced types of trucks, underframe and draft gear—virtually eliminate damage to lading en route. Most of the features of the GAEX car are found, individually, in certain box cars which have been in revenue service for a number of years. The chief novelty of the plan is that it combines these features into a standardized car which is to be supplied to the railroads on lease. It is asserted of the plan that it has the novel virtue of overcoming the railroads' age-old objection to spending large sums to buy and maintain "fancy" box cars, only to have them disappear from the property for years at a time—at $1.75 a day.

There is no doubt that the marvelous universal interchange of freight cars prevailing in North America has the natural effect of discouraging the purchase of freight cars which cost more than the average to own or maintain. The automotive trade enjoys the use of a greater number of device-equipped covered cars than any other industry. With good reason, those railroads originating automobiles and parts have refused to assume the whole burden of owning enough device cars to handle all the traffic offered. A glance at the Railway Equipment Register will show that most large roads participating in any important stage of the movement—intermediate or otherwise—make a general practice of helping provide device cars for it. With one notable exception, automotive manufacturers give their business to the roads that furnish the equipment; the exception reserves more leeway but, nevertheless, make routings partial to the roads participating in the support of the pool of device cars.

This exception to the ordinary procedure of box car movement and supply tends to encourage excessive empty movement and the holding of empty cars at origin so that the owner may be in a position to capture traffic when offered. Its wide extension to other classes of freight would probably affect railroad cost adversely. The difficulty is two-fold: (1) The financial burden of purchasing and owning device cars is greater than for ordinary box cars; (2) The ordinary per diem is not sufficient recompense for use of these cars by other than the owner road.

Any or all of the leasing plans under discussion may help solve the first problem. If the Association of American Railroads approves a compensatory mileage rate, user cost-sharing plans, such as that set forth in the GAEX plan, may provide a solution to the second difficulty.

REPORT FROM LABOR

Most corporations, including most railroads, have made definite and praiseworthy efforts in recent years to make their annual reports more attractive to look at and easier to understand. This year, the Bangor & Aroostook has come up with what this paper believes to be a further innovation — two full pages of the 1949 report are devoted to a special statement from employees to owners and management. The seven signers of the statement hold official positions with, respectively, the Brotherhood of Railroad Trainmen, the Order of Railroad Telegraphers, the Brotherhood of Railway Carmen, the International Association of Machinists, the Brotherhood of Railroad Clerks, the Brotherhood of Locomotive Firemen and Enginemen, and the Brotherhood of Maintenance of Way Employees.

Giving what they feel to be "the views of most . . . employed by this company," they say in part:

> It is a pleasure to see progressive thought and action at work and we know that acts of economy adopted today enable us tomorrow to meet on more equal footing the competition which threatens. Only by keeping up with, or ahead of, the field can we hope to have a company that is on its steady way up rather than on the quick skids that lead to financial difficulties and unemployment. Each day we come more to recognize that the railroad industry must be kept profitable enough to furnish us continued employment and personal growth and we feel that only by sharing the responsibility for this can we as the railroad's employees claim full partnership in this business process.
>
> We appreciate that labor-saving devices are essential to continued operating profits which are necessary to save and to create jobs. Job security is our main issue these days and it must be assured by broadening the base.
>
> We find the men with whom we are doing business are fairminded and understanding. . . . We know that cooperation produces mutual benefits. . . .
>
> We recognize that this (40-hr. week) increased the operating costs of the company which had to be met in some way. . . .
>
> While the recent Dieselization of railroad motive power is a farseeing and progressive move, to our mind it rates second in importance to the general feeling of employee goodwill derived from various new activities such as meet-the president,* the suggestion system, and others. Too much cannot be said in favor of these projects and of anything else that tends toward better management-employee relations. . . .
>
> Employees of the Bangor & Aroostook are working with renewed enthusiasm. They understand they must work as a team and do everything possible to bring business to this road and to make the service so good that the business will be held to this road. We look forward, confident that with the program set up by management, with employees participating to the fullest, this road will prosper.

There is not a single word in the entire statement which denies, weakens or compromises any legitimate right, privilege or aspiration of any individual employee or of any organization of employees. But there is a great deal of old-fashioned common sense.

*See Railway Age of February 25, page 38.

You're on the right track when you ship *Katy*

Five crack Katy freights, operating on stepped-up daily schedules, provide dependable, on-time service between Texas and Oklahoma and the North, with extensive connecting service at terminals.

Smooth-hauling new road and yard Diesels, new cars and new rail . . . new automatic signals . . . the swift magic of radio, on-line and at terminals . . . service PLUS to you. Broader facilities, in rolling stock, yards and terminals, with one idea in mind: SAFER, BETTER FREIGHT SERVICE for You!

End-to-End Radio Communication means safer, speedier handling of freight, in all kinds of weather.

Automatic Block Signals precision-control the movements of Katy's freight fleet to suit your every shipping need.

Modern Freight Terminals combine human skill and mechanical facilities to process your freight with maximum safety and efficiency.

the **Katy**

M·K·T
KATY RAILROAD
MISSOURI-KANSAS-TEXAS

NATURAL ROUTE SOUTHWEST

310

every month is

PERFECT SHIPPING MONTH

on the M. & St. L.

JOHNNY CAREFUL, tracking down loss and damage claims and mishaps that cause them, is boss every April of America's celebration of Perfect Shipping Month. Each April, Shippers and Railroads take stock of progress toward the goal of completely efficient freight handling.

But nowadays, every month the year round, industry and the workers who pack, label and load freight demonstrate greater efficiency. Railroads, with constantly improved equipment, contribute to Perfect Shipping the finest transportation service ever known.

Johnny Careful also is boss all the time and Perfect Shipping Month is celebrated 12 times a year on

The Minneapolis & St. Louis Railway

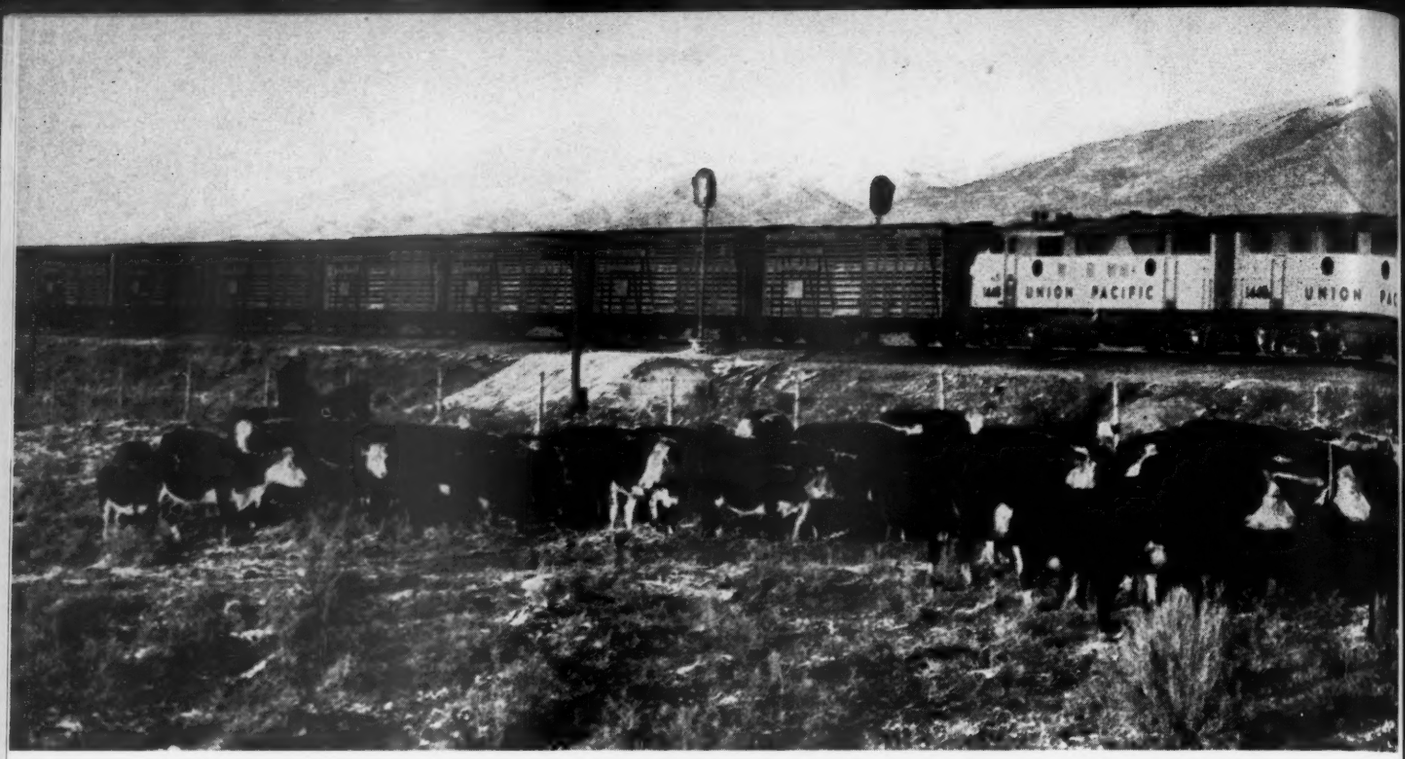
In the Great Midwest, M. & St. L. freight service, for Shippers and Receivers, for Agriculture and Industry, for Connecting Roads, is as nearly perfect as teamwork of skilled workers can make it. Helping also are growing fleets of modern cars and engines, with new Diesel Locomotives powering all trains.

THE MINNEAPOLIS & ST. LOUIS RAILWAY CO. — THE PEORIA GATEWAY

The **Minneapolis & St. Louis** *Railway*

Traffic Offices in 36 Key Cities

GENERAL OFFICES: NORTHWESTERN BANK BUILDING, MINNEAPOLIS 2, MINNESOTA



Union Pacific Builds Up

A little over three years ago the operating staff of the Union Pacific, Salt Lake City and west, were electrified almost to incredulity by a wire from Vice-President P. J. Lynch (operations) reading:

> **"Effective from Salt Lake City Thursday March 13 it will be arranged to handle livestock through to Los Angeles without stops for water and feed . . ."**

The road's now well-known "DLS" (Day Light Stock) run was initiated as scheduled, and in the more than three years now passed has never missed a day of service over its difficult 784-mi. mountain-and-desert run, nor failed to get its valuable live load to Pacific Coast market yards before the 36-hour travel deadline. "DLS" has been popular with the trade, as indicated by the fact that it handled 9 per cent more cars of livestock in 1949 than it did in 1948, despite a decline in livestock loadings in the country as a whole in the same period. (Loadings of Class I roads as a whole in 1949 were 13 per cent under 1948.) The train handled 30 per cent more cars of livestock in the first three months of 1950 than in the corresponding period of 1948, and 11 per cent more than in the equivalent 1949 quarter.

Cuts Out Intermediate Feeding

The long-term aim behind the establishment of "DLS" was to cut the time of the trip so that livestock would arrive at destination in better shape. The immediate object was to overcome the physical problem posed by the growth of animal traffic beyond the capacity of Las Vegas (Nev.) pens to handle it for the intermediate rest stop and feeding necessary under former schedules of 57 to 60 hours for the Salt Lake City-Los Angeles run.

Livestock traffic westbound over the U. P. into the Los Angeles area has grown apace with the phenomenal increase in that section's population. Carloads of livestock handled at Las Vegas increased as follows:

1929	6,847
1939	10,087
1944	20,484
1946	24,000

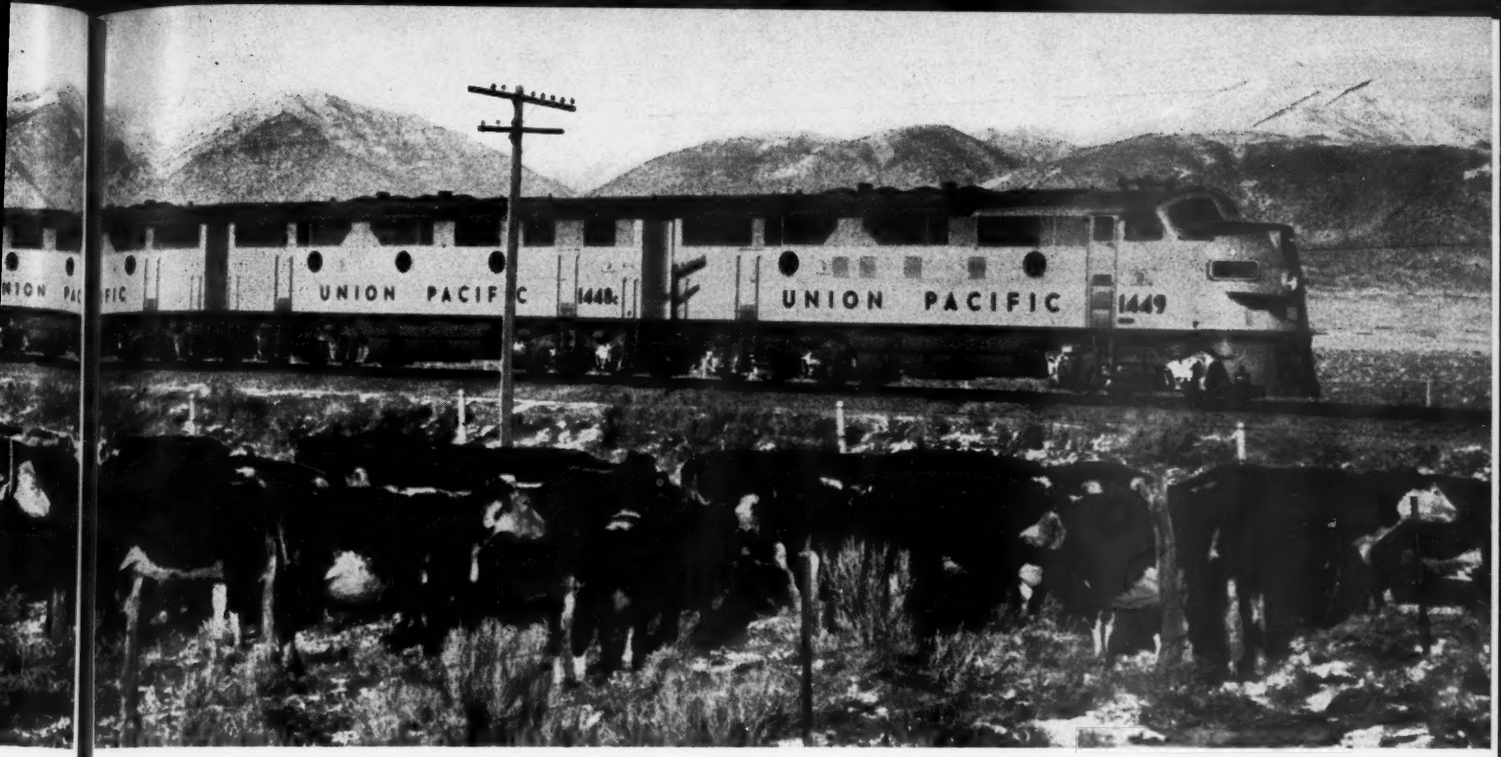
The road was faced with the choice of expanding its role as innkeeper for cattle, sheep and swine by enlarging its handling facilities at Las Vegas or figuring out a way to highball the stock trains so fast that they would reach Los Angeles yards with a safe margin to spare before the 36-hour rest deadline.

It chose the latter alternative. On the first test run, stock had to be unloaded 67 miles short of the mark — at San Bernardino, Cal. The second run got the animals through to the Los Angeles yard before the 36 hours were up, but not in time to make all required track side deliveries. After that "DLS" turned in passenger-train performance on its schedule. The Las Vegas pens were closed down six weeks after the first through run was made and were torn down for good in the fall of 1947.

"DLS" — officially carded as No. 299, "Stock Special" — makes its 784-mi. journey in 27 hours, or at an average speed of 29 m.p.h., including an average of eight stops en route for inspection or pick-ups. Top speed is 60 m.p.h. It cuts the 56-hour transit time of the best comparable train run just prior to its inception — the so-called "Night Live Stock" — by more than half, as shown in the comparative condensed timetable herewith, and compares with 57 hours for the former best

HOW INTERMEDIATE FEED IS CUT OUT

	Today's "DLS"	Best Former Stock Train
Lv. Salt Lake City	12:30 p.m.	8:00 p.m.
Arr. Las Vegas	1:00 a.m.	6:30 p.m. next day
Lv. Las Vegas	1:45 a.m.	4:30 a.m.
Arr. Los Angeles	3:30 p.m. next day	4:00 a.m. third day
Elapsed Time	27 hr.	56 hr.



Traffic With a Fast Livestock Train

For more than three years, the 784-mi. desert run has been made at passenger-train speed, without feeding-stop delays

day stock run. Besides cutting out the intermediate stop-off, "DLS" has the advantage of getting the animals into the destination market early in the afternoon, with plenty of time for food and rest before the next day's "kill." Today's "DLS" stop for inspection at Las Vegas averages but 45 minutes, compared with 10 to 14 hours under the old arrangement. Actually, of course, "DLS" is a daylight train only at the extreme ends of its run. The majority of its running is done in the cool of the night, a fact of great importance to the welfare of the livestock it carries.

Three Foundation Stones

For about nine months of the year "DLS" usually runs solid livestock; the other three months it may be filled out with preferred loads such as automobile parts, dairy products and pool freight. It is limited to not over 85 cars, or from 3,000 to 3,500 tons; in the rush stock season (August-October) it is run in up to three sections. During its whole period of service, "DLS" has averaged 60 cars of livestock a day.

A solid train of modern stock cars in U. P.'s standard streamliner color scheme of canary yellow with bright red lettering, behind a three or four unit Diesel-electric locomotive, crossing the desert crowding 60 m.p.h. is an unusual sight. Equally unusual are the measures of physical improvement in railroad plant and equipment necessary to produce such a run. The foundation for "DLS" service is three-legged: (1) fast reliable stock cars; (2) Diesel power and plenty of it; and (3) an open, uncluttered right-of-way.

Especially developed for "DLS" service (and confined to that run, except for some off-season range-to-range movements) are 877 "Livestock Dispatch" cars designed to stand up under a fast service, with plenty of utilization. These cars make a complete round-trip every five days. When the U.P. rebuilt them at its Denver shops, from older steel-underframe equipment, it started anew "from the frames up." To cushion shocks at high speeds, they are equipped with Waugh draft gear and vertical snubbers. Their journal boxes are fitted with Timken roller bearings. All-steel riveted roofs were applied to all units not previously so equipped.

They have other unusual features. The roofs and ends are painted in bright aluminum, which reduces absorption of the hot sun rays during the daylight portions of the runs. Of the total number of cars, approximately 400 are of a novel double-deck design, having a shallow upper level with its floor 19 inches higher than in ordinary two-deck cars, leaving a deep lower "berth" suitable for all livestock except horses and some dairy cattle. The "DLS" cars have an inside height of 9 ft. 2 in., compared with 7 ft. 10 in. in more conventional U. P. cars. They can be used with equal facility for two decks of swine or sheep; for cattle on the lower deck and swine or sheep on the upper; or

Roller bearing-equipped, shock-cushioned double-deck stock cars are an important ingredient of "DLS" service. They are bright canary-yellow and red, with aluminum-painted roofs and ends which reflect desert heat rays

for a single deck of cattle. Shippers say they prefer this type of car for even a single-deck load because the stock has less "bumping room." Door openings are 6 ft. wide, compared with an average of 5 ft. on conventional cars. The doors themselves are held shut with a new type of door fastener. Bull-boards are made of two boiler tubes welded together, for maximum protection of the livestock, and in other respects the cars are free of dangerous protruding parts.

The "Livestock Dispatch" cars already in service constitute about 16 per cent of the road's total fleet of stock equipment. Beginning in May, the U. P. expects to turn out additional new cars of a similar design with additional refinements, including all-welded sides and ends, at the rate of about four cars a week, at its Denver shops.

Diesels Do the Job

The second fundamental of "DLS" service is a fleet of Electro-Motive and American Locomotive-General Electric 1,500-hp. Diesel-electric units which now furnish power for most of the ton-miles on the U. P.'s Salt Lake City-Los Angeles line. The fast livestock run was handled by modern steam power for the first three months of its operation, with the exception of test runs with an E.M.D. Diesel, but it subsequently has been Diesel-hauled exclusively. The locomotives work through from terminal to terminal without change. The dynamic braking with which they are equipped to cope with heavy mountain grades has been a powerful factor in cutting down injuries to livestock.

The third foundation of "DLS" performance is good handling by the operating forces. No. 299 is treated like a passenger train. The U.P. says she'll run every day, even if the road gets only one car of stock to move — an unlikely eventuality. Dispatchers and train crews are greatly aided in getting "DLS" over the road by the fact that almost the entire route — 625 miles of it from Salt Lake City to Daggett, Cal. — is equipped with centralized traffic control, said to be the longest continuous stretch of C.T.C. in the world. C.T.C. is also in operation between Riverside Jct. and Los Angeles, 58 miles, with double-track Daggett to Riverside Jct.

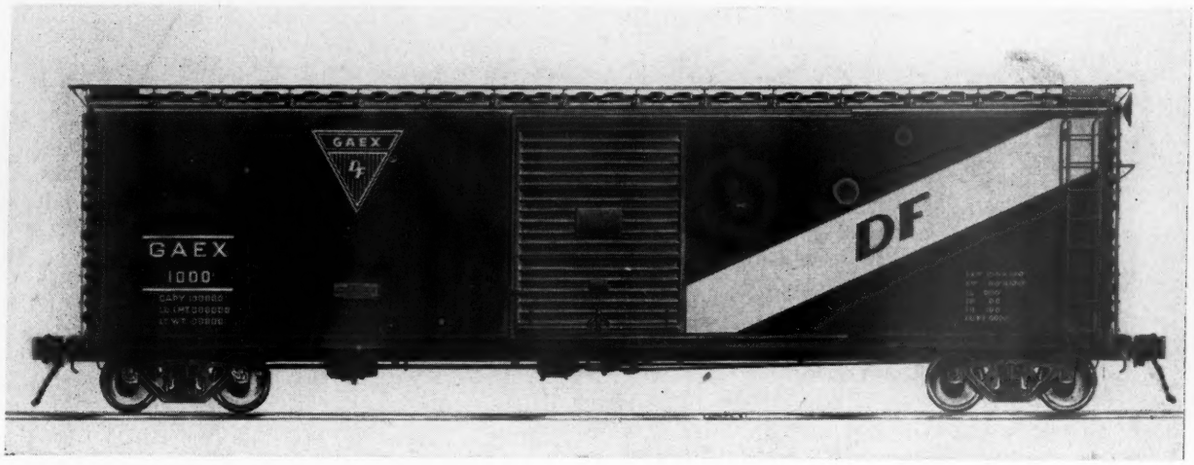
What kind of livestock does "DLS" carry? Anything on the hoof bound for the Los Angeles area from the east. Its customary cargo includes sheep from Idaho, feeder steers from Montana, horses (for dogmeat and the foreign aid program) from western Wyoming, feed-lot-fattened heifers from Utah, hogs from Iowa and Nebraska, fat heifers from the Denver market and grassfat cows from the western slope of Colorado. The stock comes from as far east as Peoria, Ill., and Freeport, Sioux City, Iowa, and Des Moines, and Omaha, Neb. All of it is rest-stopped and fed at Ogden or Salt Lake City, without regard to the time of previous feeding. To pick up stock quartered at the Ogden yards, 36 miles north of Salt Lake City, a transfer run is made daily, with cars for "DLS" leaving Ogden yards two hours prior to No. 299's departure from North Yard in Salt Lake City. Animals are brought into the Ogden and Salt Lake City yards by fast trains from the east and north. Hogs, for example, may leave Kansas City, or Omaha one evening in "DLS"; reach Laramie, Wyo., the next to join the Denver-originated stock in "Advance D. P.", and rest the third night by the shores of the Great Salt Lake.

At origin "DLS" is fully "blocked" in advance for set-outs in the Pacific Coast area. Chief of the latter are: (1) Barstow for delivery to points in the San Joaquin Valley by the Santa Fe; (2) San Bernardino for movement by the A. T. & S. F. to San Diego; and (3) Colton for interchange with the Southern Pacific. In addition, five classifications are made for Los Angeles proper — four by subdistricts for U.P. delivery and one for the A.T.&S.F.

In 1949, the U.P. handled more cars of livestock than any other live-haul carrier in the country. The speed and versatility of its "Day Light Stock" were well indicated by Railroad Magazine, in its title, "Highballing the 'T'-Bones!"

"Shippers' Delight" Box Car

Railroads have under study a proposed General American-Evans pool of high-speed shock-proof equipment to be leased to them as a means to win back high-rated traffic



Artist's drawing of GAEX car now under construction

A brand-new type of lease arrangement, which would make available to shippers a versatile box car incorporating many of the latest design and specialty features for shock-proof, high-speed carriage, as well as the Evans "Damage-Free" loading device, is currently being studied in detail by the most of the country's trunk-line railroads. Advanced by the General American - Evans Company, of Chicago (a newly formed joint operation of the General American Transportation Corporation and the Evans Products Company), the plan contemplates that a pool of standardized, ultramodern cars would be built and owned by G.A.-E. for lease, on a ten-year basis to railroads only, with compensation for off-line use to be covered by a suitable mileage allowance. This development was reported initially in *Railway Age* of March 18, page 84. The Association of American Railroads already has assigned reporting marks "GAEX" to the cars and has before it currently the question of an equitable mileage allowance.

Mechanics and Economics

With the possible exception of the details of the car body itself, there is no feature of the new "D-F" box car which has not been tested separately in revenue service for a number of years. The true significance of the development to the shipper is that there now can be made available to him, for the first time, on a wide national basis, a fleet or pool of standardized cars, each of which possesses in combination features of design and device which have proved effective in enlarging load capacity, cutting his cost of loading and unloading by obviating bracing and blocking and, according to the proponents, "reducing damage en route to the point of extinction."

Equally important to shippers is the fact that — provided the A.A.R. approves a compensatory mileage allowance — there will exist, also for the first time, a means of distributing the cost of device-equipped cars among the roads participating in the haul more equitably than is possible under ordinary per diem payments. It is obvious that, under normal existing arrangements for box car use, most roads stand to lose financially when they provide equipment in open interchange which, because of refinements beyond the conventional, costs more to own or maintain than the average. G.A.-E. asserts that this form of car leasing will break down, in effect, the vicious circle which presently militates against roads according to certain categories of carload shippers the "better-than-average" box car they seek for their business.

The GAEX plan does this chiefly by substituting a mileage payment basis for per diem. (Reportedly, interested railroads are discussing an allowance ranging from three to four cents a mile; G.A.-E. favors the latter.) Any railroad which leases GAEX cars would be reimbursed for their use by other roads on this basis, the mileage to be recorded and collected by G.A.-E.

Above—The Evans D-F loader, installed in a railroad-owned box car, as used for segregating and securing parts for Ford vendors

Below—The interior of the new car, under load, will look somewhat like this

by the same machinery set up by General American Transportation for its present fleet of almost 42,000 tank cars and 11,700 refrigerator cars. At the same time, the lessee road would have its name placarded on the car and would clearly control the furnishing of the equipment to its customers.

A Competitive Vehicle

The GAEX car is designed to match mettle with highway trucks and "semi's." It is not intended to be "thrown out into the field for general traffic" nor to replace the country's box car fleet. There is a large body of shippers, the company says, who would in no way benefit from the use of D-F cars. "Bedsprings and corn" will go just as well in the conventional car.

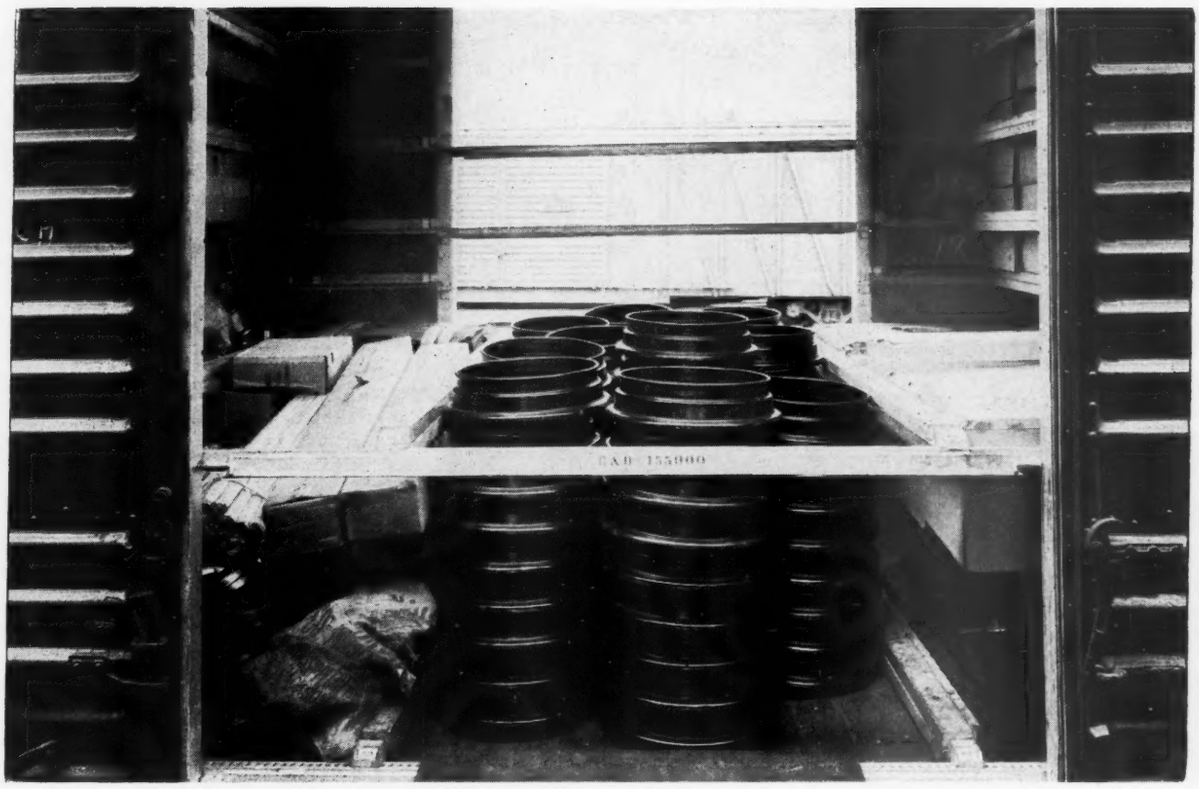
The D-F car is designed to care for the heavy loading of high-revenue products of manufactures — in particular those vulnerable to highway competition by reason of rate or service disadvantages under existing conditions. "Many" loads of more than 100,000 lb. have been carried in D-F-equipped cars without dunnage and without damage. The company estimates that the loader makes possible an *average* increase in safe payload of 33 per cent. In revenue service test runs, use of the device has boosted load weights up to 200 per cent, compared with the same car loaded unequipped. The higher revenue per car-mile which the railroads would earn with D-F cars, G.A.-E literature argues, should enable them better to meet rate competition from the trucks. Elimination of the need for blocking and bracing loads in the D-F car will save the shipper enough time and money, it is said, to neutralize many of the present alleged service advantages of shipping by truck, even without regard to growing shipper good will resulting from the reduction or complete elimination of damage en route.

What the Shipper Gets

General American has 25 GAEX cars under construction at its East Chicago shops on which the steel work has been completed and application of wood is under way. A complete mechanical description of the equipment is scheduled to appear in an early issue of *Railway Age*.

Shippers will find chief interest in the fact that the cars are designed especially to accommodate power truck freight handling, palletized shipments and heavy loadings, through the provision of extra-wide doors, nailable steel flooring and added reinforcement of the body structure. Safer movement of their goods at high speeds is to be made possible by the incorporation — as an integral part of the car — of shock-proof features in trucks and under frames. Finally, safe heavy loading, to any level, without dunnage, is made possible by the installation of the Evans "Damage-Free" device, comprising wall members to which may be attached, in a wide variety of positions, adjustable, removable cross members.

This device — which Evans calls "general purpose equipment adaptable to every kind of load usually shipped in the ordinary box car" — in effect "unitizes" the load by sectionalizing it and supporting it snugly, top and sides, across the car. In its original form, it was first publicized in 1941, following a full year in



A D-F loader-equipped box car piled high to the doorway and filled in at a lower level

actual revenue service which, in turn, was preceded by three years of engineering development. At present, the D-F loader is installed in a total of 1,135 box cars of railroad ownership. The device has proved popular particularly with shippers of such commodities as automobile and aircraft parts, electrical appliances and batteries, because it eliminates the need for blocking and bracing, saves man-hours and cuts damage en route.

The new GAEX car is expected to cost about $9,000 to build, compared with $4,500 to $6,000 for a conventional box car. G.A.-E. proposed to lease it to the railroads at a rental of about $125 a month, about $4 a day, to cover all costs, including maintenance. The company has prepared a number of computations comparing the full cost of leasing GAEX cars with the cost of owning equipment of similar standards. The gist of them appears to be that, without consideration of mileage pay earned when the car is off-line, it would cost the lessee railroad about $1 a day more to lease a D-F car than to own a comparable car. Estimates of costs of owning cars outright do not take into account the burden of maintenance facilities, staff and parts inventory.

To offset any increased cost of leasing remaining after mileage is figured in, advantages of a national pool of D-F cars, over individual railroad ownership, are summed up by its advocates as follows:

(1) The railroads need make no capital investment.

(2) The long-time provision of all tank cars and the majority of refrigerator cars by private-car-company leasing arrangements has proved this scheme can make fewer cars do more work.

(3) Provision of a standardized D-F car will eliminate the need for other types of specially equipped box cars — of which there is now a wide variety. The GAEX car will take care of more than 90 per cent of the lading of box cars now specially equipped. The chief exceptions are certain automotive parts — such as engines, transmissions and oversize pressings.

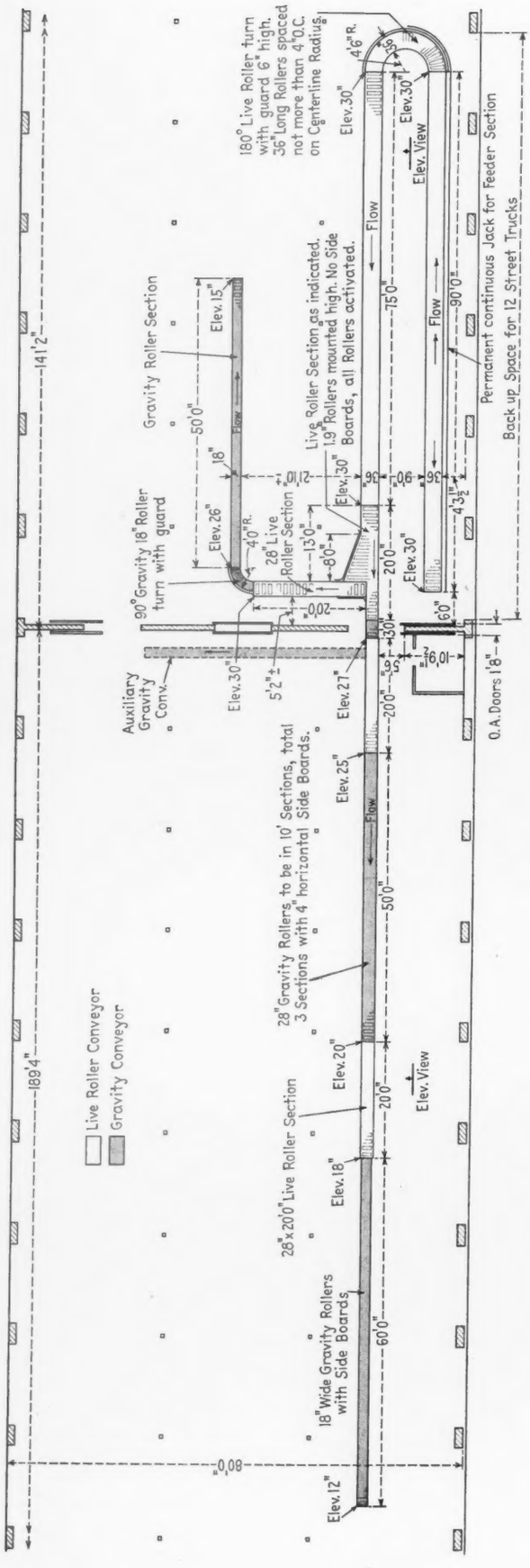
(4) Utilization of the D-F car will be greater because the G.A.-E. operating organization will follow individual car movements closely and divert cars from railroad to railroad, according to system shortages and surpluses. Due to this centralized movement reporting and control, plus the popularity of the D-F car, GAEX leased equipment is expected to roll up more revenue-earning miles than ordinary railroad-owned cars. Private car equipment of General American Transportation is averaging 88 miles a day, compared with a 33-mi. average for railroad-owned box cars; G.A.-E. believes its traffic department can keep GAEX equipment in that range or above.

(5) Shippers using GAEX cars for the first time will be accorded instruction and advice by experienced G.A.-E. loading personnel and full service thereafter.

The General American-Evans Company is owned 90 per cent by G. A. and 10 per cents by Evans. G. A. is the owner of the country's largest fleet of private freight cars for lease and maintains for their maintenance a total of 30 car shops located strategically about the country. At its 114-acre plant in East Chicago, it can produce from 40 to 50 freight cars a day for its own use and for sale. Evans Products is a developer and producer of a wide range of devices for industry and transportation. It engineered and has long manufactured an "Auto Loader" for cradling set-up automobiles in box cars. Ben Coleman, is to head the new joint company as president, while Lester N. Selig, chairman of the board of General American Transportation, will be chairman of the board. Headquarters is at 135 South LaSalle st., Chicago.

Power Conveyor at

Peak loads handled efficiently and with reduced damage—Gravity conveyors utilized also


180° Live Roller turn with guard 6" high. 36" Long Rollers spaced not more than 4" O.C. on Centerline Radius
Gravity Roller Section
Live Roller Section as indicated. 19 Rollers mounted high. No Side Boards, all Rollers activated.
Flow
Elev. View
Permanent continuous Jack for Feeder Section
Back up Space for 12 Street Trucks
90° Gravity 18" Roller turn with guard
28" Live Roller Section
Auxiliary Gravity Conv.
O.A. Doors 18"
28" Gravity Rollers to be in 10' Sections, total 3 Sections with 4" horizontal Side Boards.
28"x200" Live Roller Section
18" Wide Gravity Rollers with Side Boards
Live Roller Conveyor
Gravity Conveyor
141'2"
189'4"

A new belt-powered roller conveyer system recently installed at the Railway Express Agency terminal in Atlanta, Ga., has expedited the handling of traffic and decreased damage to shipments. This new "live roller" method replaced a gravity conveyor system of handling express traffic; it was installed without stopping the general operation of the terminal.

Packages move on the rollers at 100 ft. per min. The installation handles a greater volume of traffic than did the gravity conveyor system, for with the latter the necessity of having the conveyors low enough for route clerks and pickers to work efficiently necessarily limited the speed at which freight could flow. Especially during rush hours the slower speed meant that men along the line had to do much pushing of shipments to keep them moving, with the result that jams occurred and freight sometimes was damaged. This is not likely to occur with the new method, as the average flow on the conveyor is 75 pieces per minute, with the peak loads much greater.

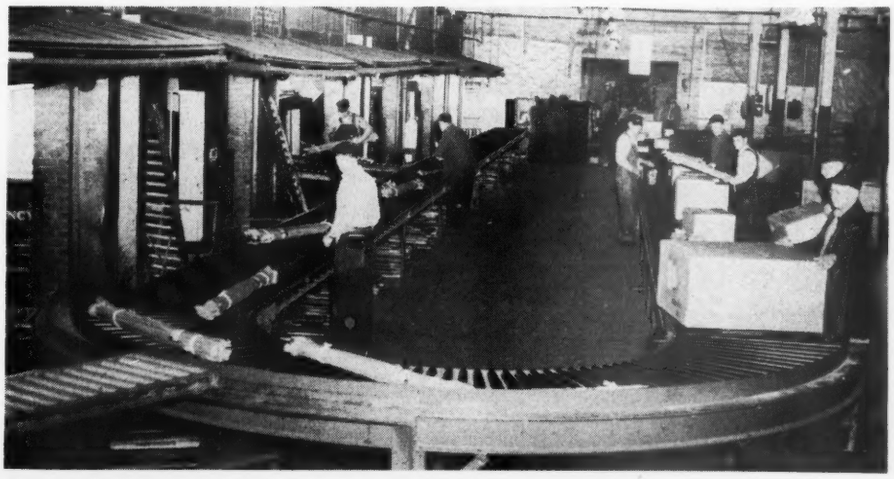
A normal volume of traffic at Atlanta is 17,000 transfer and city pick-up shipments per day, running to about 50,000 pieces. A great part of this volume appears at the terminal between 5 and 7 p.m., making it essential to have a handling system that is very flexible and capable of handling peak volume in a short period of time.

The eight motors which power the belts, which in turn drive the rollers, vary between ¾ and 6 horsepower. The powered sections are 245 feet long, plus the 180 deg. angle turning section at the head of the house.

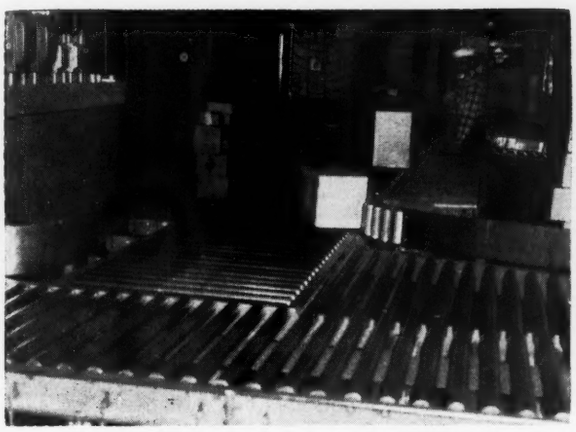
An interesting innovation in this conveyor system is the alternation of live and gravity roller sections at the lower end of the line (see illustration). Just after freight passes the fire wall between the two sections of the warehouse it goes onto a 50-ft. section of gravity roller conveyor. After traversing that distance the shipment enters upon a live roller section, 20 feet in length, which supplies enough impetus to carry the shipment the next 60 feet on the gravity roller conveyor. A reason for these gravity sections is to slow the freight on its journey through this section of the warehouse, where most of the freight is picked from the conveyor line by the handlers and loaded on trailers for movement to cars. (Thirty-nine different sorts are made along the alternated sections.)

This installation was made by the Mathews Conveyor Company, Elwood City, Pa., under the general direction of C. G. Peterson, chief engineer of the R.E.A., with G. J. Dye, superintendent of buildings at Atlanta, supplying on the spot supervision. O. W. Harding is superintendent of the Express Agency's Atlanta district.

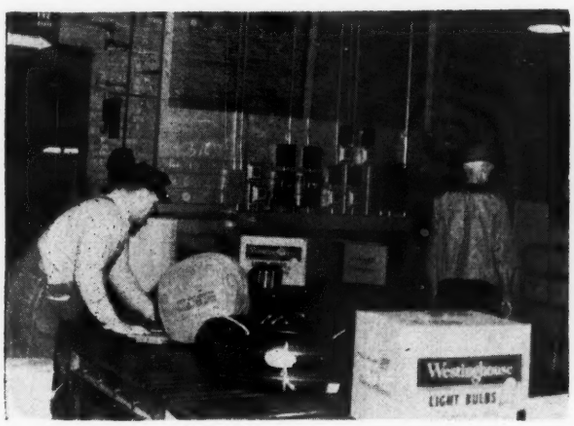
Atlanta Express Terminal Speeds Shipments



Pick-up trucks discharge their loads onto conveyor at left. Flow is toward curved section in center foreground and then down the line at right. Transfer shipments are being placed on conveyor in right foreground. Conveyor extends through doorway in center background. Wooden "pallets" under conveyor line are placed under soft or irregular articles and cylindrical pieces which might roll off conveyor



Left—At this switch shipments intended for some cars are pushed onto a branch conveyor leading off into background. The belt which drives the live rollers is in the immediate foreground under the rollers. Right—The curved live roller section at the head of the conveyor line. Transfer freight is being placed on a conveyor at left. Route clerk at right is ready to mark the next piece of freight for proper destination car



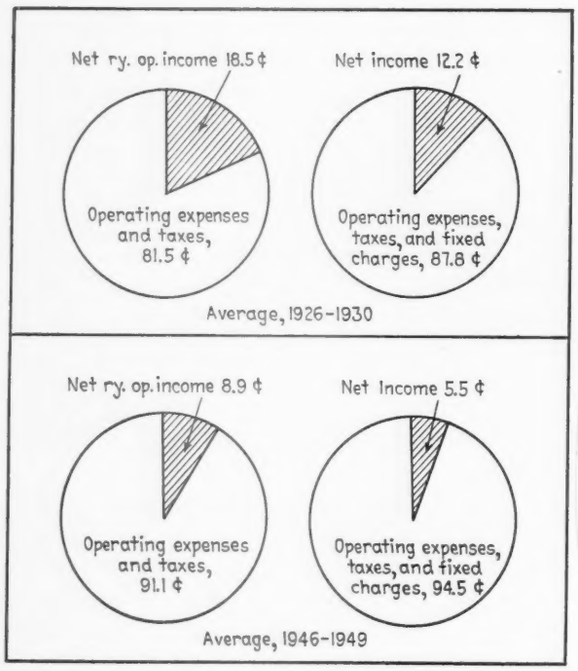
Left—At the switch some shipments are shunted off to conveyor line in right background while others go through doorway at left. Right—Short magnesium gravity conveyor sections carry shipments from street trucks and make automatic transfer to line of power conveyor

Highlights of the

THE NARROWING MARGIN OF PROFIT

(Cents per dollar of gross revenues)

Class I Railways in the United States 1926-1930 and 1946-1949


Net ry. op. income 18.5 ¢
Net income 12.2 ¢
Operating expenses and taxes, 81.5 ¢
Operating expenses, taxes, and fixed charges, 87.8 ¢
Average, 1926-1930
Net ry. op. income 8.9 ¢
Net Income 5.5 ¢
Operating expenses and taxes, 91.1 ¢
Operating expenses, taxes, and fixed charges, 94.5 ¢
Average, 1946-1949

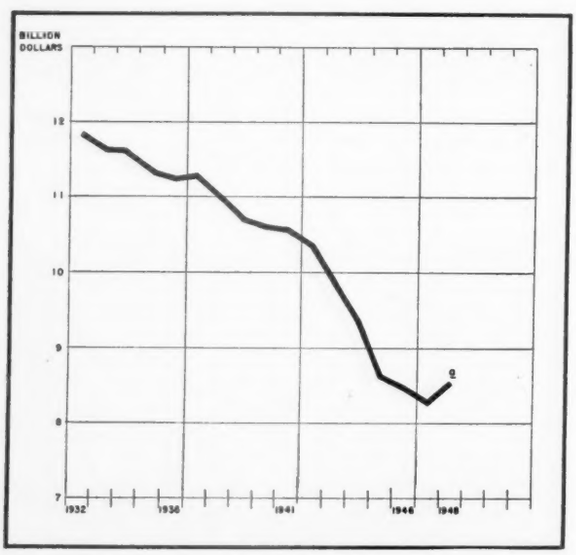
Reproduced herewith are six of the 13 charts recently presented to the Senate's subcommittee on domestic land and water transportation by Julius H. Parmelee, vice-president of the Association of American Railroads and director of its Bureau of Railway Economics.

They graphically support Dr. Parmelee's testimony to the effect that the railroads "are conservately financed [and] have for many years reduced their debt and fixed charges"; but that, "despite these progressive accomplishments," they are "in serious financial difficulties" because their wage and material costs have increased so much more than their freight rates and passenger fares that "their earnings are not now sufficient to attract a continuing flow of new capital."

Dr. Parmelee's testimony, which was presented in the course of the sub-committee's general investigation of transportation, was reported in detail in the *Railway Age* of April 8, page 53.

RAILROAD FUNDED DEBT

All Line-Haul Steam Railways—1932-1948



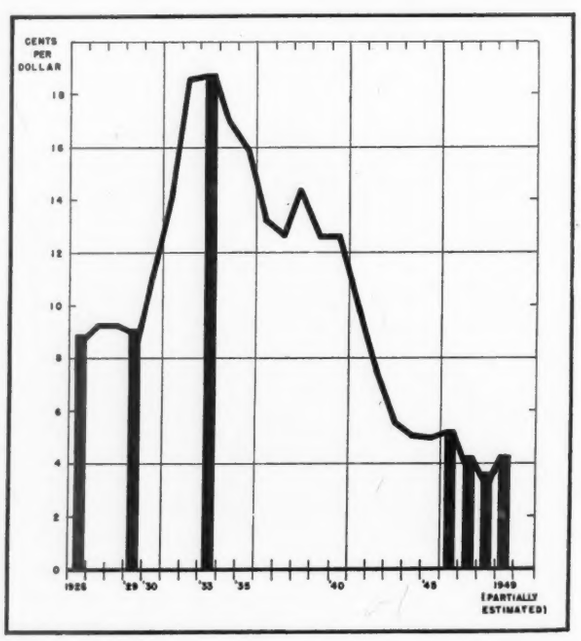
Excludes debt owned by railway companies, and securities nominally issued or nominally outstanding. Includes equipment obligations

[a]Increase from 1947 to 1948 due largely to an increase of $323 million in equipment obligations. New freight-car and other equipment installations were unusually heavy in 1948

Source: Interstate Commerce Commission

CENTS PER DOLLAR OF GROSS REQUIRED TO MEET INTEREST ON FUNDED DEBT

Class I, II and III Railways and Their Lessors, 1926 1949

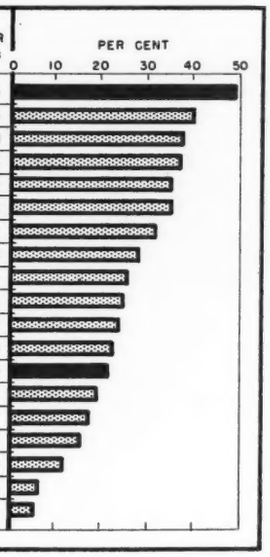


RAILROAD SITUATION

RATIO OF WAGES AND SALARIES TO VALUE OF SALES

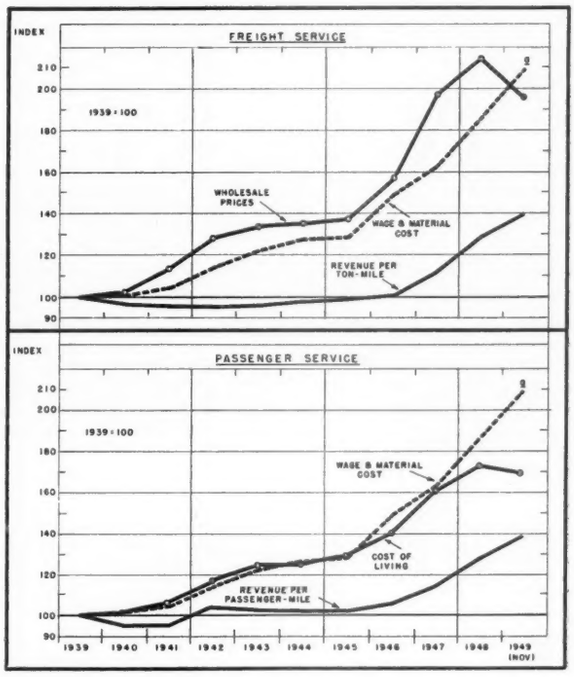
Manufacturing Industries and Railroads

INDUSTRY.	YEAR 1948
RAILROADS – CLASS I	49.3
Machinery (except electrical)	40.5
Furniture and finished lumber products	37.8
Transportation equipment (except autos.)	37.3
Stone, clay and glass products	35.5
Printing and publishing	35.5
Electrical machinery	32.1
Iron and steel and their products	28.8
Textile-mill products	26.1
Leather and leather products	25.5
Paper and allied products	24.6
Rubber products	23.0
ALL MANUFACTURING	22.0
Nonferrous metals and their products	19.9
Chemicals and allied products	17.3
Automobiles and automobile equipment	16.1
Food and kindred products	12.0
Tobacco manufactures	6.3
Products of petroleum and coal	5.3



TREND IN RAILROAD UNIT REVENUES AND COSTS

Class I Railways in the United States, 1939-1949

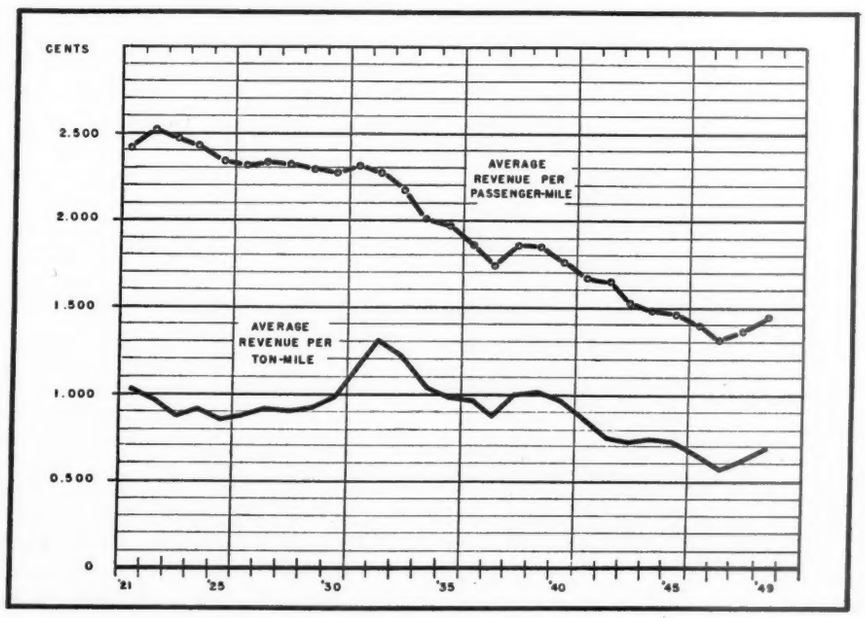


[a]As of October, 1949

AVERAGE REVENUE PER TON-MILE AND PER PASSENGER-MILE

(Adjusted to 1935-1939 dollars[a])

Class I Railways in the United States, 1921-1949



[a]Average revenue per ton-mile adjusted for trend in wholesale prices. Average revenue per passenger-mile adjusted for trend in cost of living

Members of the American National Livestock Association see the citrus rag, pulp and seed from which dried citrus pulp and citrus molasses are made

New Traffic for the Atlantic Coast Line

The road's agricultural and livestock development department promotes use of citrus pulp and molasses as livestock feed

ATLANTIC COAST LINE

AGRICULTURAL & LIVESTOCK Topics

Vol. 1 FEBRUARY-MARCH, 1949 No. 2

Citrus Products For Cattle Feed

The great expansion of the Florida citrus canning industry has provided an enormous tonnage of citrus by-products for use as cattle feed. Dried citrus pulp is made from the rag, peel and seed, which is the waste from canning juice and sections. This residue is pressed, ground, and dehydrated, resulting in the dried pulp. The juice, pressed from this pulp, is then processed into citrus molasses.

The increased amount of Florida oranges and grapefruit going into cans during the past eight years has been paralleled by the increased production of dried citrus pulp and citrus molasses. During the 1940-41 season, 23,731 tons of dried citrus pulp was produced. This was increased to 154,181 tons during the 1947-48 season. The production of citrus molasses has been 13,656 tons during the 1940-41 season, and increased to 66,897 tons during the 1947-48 season.

With the demand by the livestock producers to learn more of the value of citrus products as a feed, the Florida Agricultural Experiment Station at Gainesville, Florida, and the Range Cattle Station, Ona, Florida, have been very active in their research work to determine the value of this feed. At the Gainesville Station, experimental trials on the use of citrus pulp in dairy rations indicated that citrus pulp was equal in feeding value to beet pulp, the standard dairy ration. Hogs were more economically produced with dried citrus pulp because of the lower cost per pound of nutrients. At the Range Cattle Station, dried citrus pulp was found to be equal in ground ear corn in fattening value. The dried citrus pulp rations were more efficient and produced more economical gains because of the lower cost per pound of nutrients.

Table I.—Comparative Cost Per Pound of Nutrients

From the information in Table I, it is seen that citrus feed products are the cheapest source of feed nutrients available at the present time. This fact should be of interest to all livestock producers for use in dairy, fattening, and maintenance rations.

Considerable information is available on the results of fattening cattle on rations of citrus feeds. Experimental and practical results reveal that cattle can be fed for a profit on properly balanced rations of dried citrus pulp, citrus molasses, fresh recovery waste, fresh fruit, and combinations of these feeds in dry lot and on pasture. In this instance, economy is more dependent upon fattening cattle for proper market conditions. However, many cattlemen are overlooking the fact that there is a definite need for providing a higher plane of nutrition for stocker cattle, particularly beef cows, during the winter months. Experimental results show that the rate of gain of cattle on pasture reaches a peak about the middle

Coast Line Distributes Booklet On Everglades

Pay-Dirt is the title of a booklet recently prepared and now being distributed by the Development Service of the Coast Line. Continuing its long history of pioneering and assisting in the development of new territory, Coast Line recently obtained authority and is now constructing sixteen miles of railroad south of Lake Harbor, Florida, into the famous Florida Everglades. This new line is to be known as the Okeelanta branch and will traverse a previously undeveloped area of rich organic soils five to eight feet deep, and deeper, for several miles in all directions. A description of this undeveloped territory and its unlimited productive possibilities is the content of the booklet, Pay-Dirt.

Never completely explored by white men and with great areas remaining unmapped, the sprawling "River of Grass" stilling from the southern and western shores of the 700-square mile Lake Okeechobee and covering an area of 2,500 square miles in south central Florida, is retreating before the onslaughts of modern pioneers and yielding its miraculous "pay dirt" for the production of vegetables and other important crops.

Profusely illustrated throughout its 19 pages, the booklet gives a brief history of the region and outlines in detail the work being done by the railroad and governmental agencies to make the region a modern "farm of plenty." Agricultural and livestock development in the Everglades, together with industrial progress, is pointed out in the completed by the use of maps, photographs and descriptive matter.

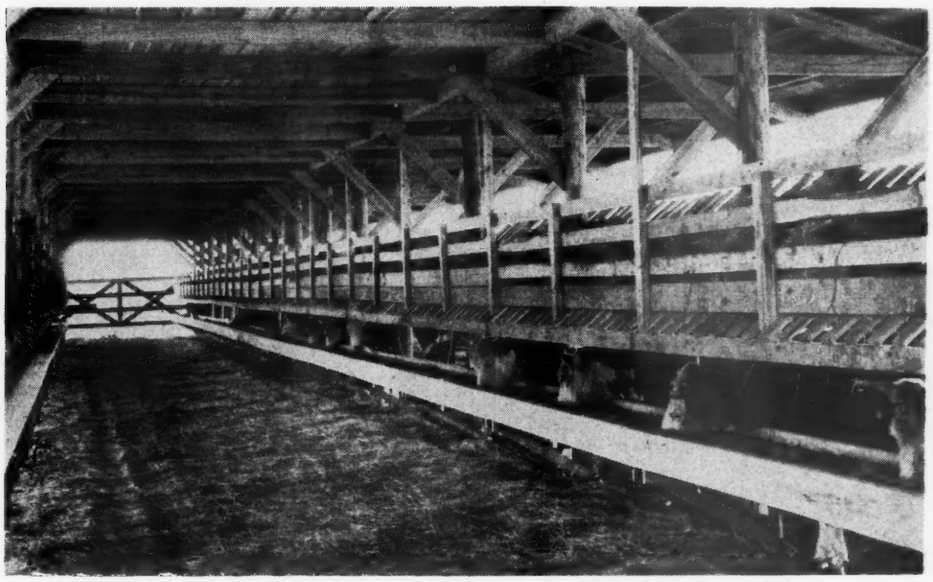
Copies of "Pay Dirt" are available through Mr. V. W. Lewis, Manage-

The February-March, 1949, issue of the Atlantic Coast Line Agricultural and Livestock Topics carried an article on "Citrus Products for Cattle Feed," which said, among other things, that "citrus feed products are the cheapest source of feed nutrients available at the present time"

As a result of the promotion work of its agricultural and livestock development department, the Atlantic Coast Line is now moving new freight traffic in the form of by-products of the Florida citrus canning industry. Primarily, the movement is one of dried citrus pulp, i.e., the seeds, peel and rag combined, which is used as cattle and hog food, with great benefit to the users. This new traffic helps somewhat to offset the decrease in the amount of citrus fruit moving out of Florida, a result of the rapid popular acceptance of concentrated frozen juices. (One car of the fruit juice concentrate represents about 11 cars of oranges.) Since the citrus by-products are cheaper than most other supplemental foods, and are as valuable nutritionally, the cattle and hog raising industry is growing in the South, making an even larger traffic potential for the Coast Line to tap.

Dried citrus pulp was first produced commercially in the 1937-38 growing season, when some 9,000 tons were put on the market. In 1947-48 the output rose to 154,181 tons of citrus pulp and about 66,000 tons of citrus molasses. While most of the citrus molasses is used within Florida, much of the pulp is shipped into Georgia, the Carolinas, and even farther north. This means business for the A.C.L., so the railroad has been actively engaged in promoting its use by the cattle and hog raising industries in its territories.

On the staff of the Coast Line's agricultural and livestock development department are 10 men who have spent much time in promoting the use of these by-products of the citrus canning industry. Their efforts



Steers thrive on manufactured citrus-products feed at the Waverly Citrus Growers' Cooperative, Waverly, Fla.

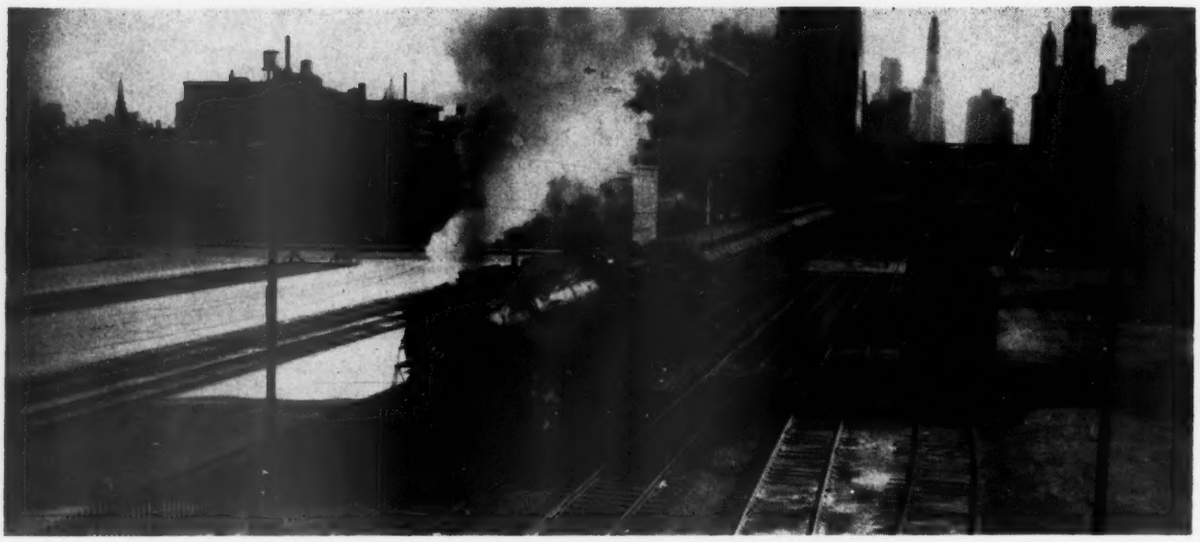
have consisted of (1) personal calls on many cattle raisers to explain the advantages of the citrus feeds; (2) helping the farmer to build the proper feeding troughs; and (3) producing a paper called the Atlantic Coast Line Agricultural and Livestock Topics. Although only two years old, this publication has run several articles on the benefits of citrus pulp and molasses as a feed for cattle and hogs.

In the February-March issue of Topics, for instance, there was an article which showed that not only were citrus and pulp molasses cheaper cattle foods than ground snapped corn, but that they were fully as good as dried beet pulp, a standard cattle food. Milk, the article continued, was more economically produced because of the lower cost, per pound, of nutrients. Such literature, widely disseminated, favorably affects the use of the citrus by-products.

The Coast Line's promotion department also took a part in persuading the American National Livestock Association to hold its January, 1950, meeting in Florida, the first time that organization ever met east of the Mississippi river. A special train-bus tour of the cattle producing areas was arranged for the stock raisers. Among other things, they were shown the process used in manufacturing the citrus pulp and molasses, and the results of feeding these foods to the cattle. Since that date many inquiries have come asking about the possibilities of getting into the cattle raising business in Florida.

By helping to promote the raising of cattle in Florida the Coast Line is giving itself an opportunity to secure more business. Many Florida cattle are raised for breeding purposes and to be shipped west to Texas, New Mexico, etc. Also, veal calves are raised in quantities and shipped to northern markets, a practice which again has made business for the Coast Line. While most of the beef cattle raised in Florida, outside of those for breeding purposes, are consumed within the state, the expectation prevails that as the industry grows, stimulated by the favorable climatic and feeding conditions, more and more cattle will be shipped over the lines of the A.C.L.

Western cattlemen examine citrus pulp in the plant of the Florida Citrus Canners Cooperative, Lake Wales, Fla. The occasion was the tour of the cattle raising areas of Florida, sponsored jointly by the A.C.L. and various local organizations



ECONOMICS OF DIESEL-EL

Passenger service of Class I railroads was operated in 1948 at a deficit of $559 million. The loss is mainly attributable to the relatively short runs, to branch line trains, and to the increasing diversion of traffic to buses, private automobiles and airways. While great efforts have been made to improve the efficiency of motive power, even the Diesel-electric locomotive, successful as it has been on long-distance hauls, fails to be a complete cure. Nothing short of a profound change in the technological structure of local, branch-line and suburban hauls will enable the railroads to operate passenger service at a profit. Here the Diesel-powered motor train offers definite possibilities.

Motor trains, in the sense intended in this article, must not be confused with the self-propelled cars of the Twenties ("doodle bugs") or with motor trains of the early "Zephyr" variety with head-end locomotive-type Diesel engines. Motor trains as treated in this article are trains which have no locomotive, which can run in either direction, and which consist of 2 to 10 or more cars, some or all of which are equipped with individual power plants. These cars, called power cars in contrast to the non-powered cars, called trailers, are under remote control from the driver's cab at either end of the train by means of a low-voltage cable running the entire length of the train. The combination unit of power cars and trailers is equipped with driver's controls at each end as in electric suburban trains.

Fields of Motor Trains

The power plants are "packages" similar to those of buses, and the power cars contain seats up to the full capacity of ordinary coaches. Customarily, motor trains consist of one or several two- or three-car units. A two-car unit includes a power car and a trailer or, more seldom, two power cars. A three-car unit consists either of two power cars with a trailer in the middle, or of one power car and two trailers, the power car being either in the middle or at one end.

The motor train is the ultimate fulfillment of the most distinctive characteristic of Diesel power—namely, its decentralization into a multiple of highly efficient small and independent, yet centrally controlled units.

Motor trains can be considered for local and interurban service on main lines; for branch-line trains, where they may be cut off from and joined again with main-line trains, thereby providing fast and convenient direct connections between large cities and smaller communities along secondary lines; and for suburban service. Of these three operations, the last presents the greatest problem in justifying expenditures for new equipment, and will be used as the example for this discussion. Even in the commuter field, however, where a return on an investment is most difficult to realize, it can be shown that the motor train is a profitable investment.

The Nature of the Problem

Suburban passenger service is, as a rule, an unprofitable yet an important business. According to Association of American Railroads, suburban commuter service accounts for almost 50 per cent of all passengers carried and nearly 18 per cent of the total passenger-miles of Class I railroads.

The rapid development of residential suburbs and of industrial reservations along the outer edges of large cities confronts existing suburban lines with the problem of providing fast and frequent service, and may also necessitate the extension of passenger transportation to the existing freight-carrying belt or loop

Facing page — The passenger locomotive —steam or Diesel— is at its best at the head of a long, heavy train. Right — Multiple-unit train service need no longer be confined to electrified lines

EL- ELECTRIC MULTIPLE-UNIT TRAINS

A study of the possibilities of improving suburban type passenger service with a reduction of operating expenses

By H. BLEIBTREU
Consulting engineer, Research and Development Division,
Pullman-Standard Car Manufacturing Company

lines to create fast connections between residential and industrial areas at the city outskirts.

Boulevards and superhighways are certainly indispensable supplements to the suburban train, but neither the private automobile nor the bus will be able to replace its large seating capacity and its fast and dependable service.

With a rush-hour sequence of a train every five minutes, and seven cars per train with 85 seats per car, the throughput is over 7,000 passengers per hour. To carry the same load, 175 buses of 40 seats each would be required per hour, and they would have to follow each other at the short interval of 20 seconds. Even on superhighways with a limited number of stops a frequency of this magnitude would be incompatible with economic, fast, punctual and safe transportation. Moreover, a further increase of automobile and bus traffic would aggravate the congestion and the parking problems of the inner cities still more.

Under these conditions, the railroads are confronted with new and far-reaching problems, which go far beyond minor and sporadic improvements of existing equipment. One of the most important questions is: Steam, electric or Diesel motive power?

Electrification the Ultimate Goal

The drawbacks of steam power are high standby fuel losses, high maintenance costs because of the age of most locomotives, smoke and cinder nuisance, and often long non-revenue trips from and to roundhouses. Favorable points are that most steam locomotives have been written off and that many of them are former rather powerful road locomotives, which maintain schedules that are hard to better even with modern Diesel locomotives. Because of these factors, steam locomotives cannot yet be dismissed completely from future plans. Falling residual fuel oil prices may also make practical the conversion of coal-burning locomotives to oil burners, which will partially overcome most of the principal present disadvantages of steam suburban power.

Electrification is the ideal solution and must remain the final goal. It requires heavy investments, however,

Table 1—Expense Comparison of Steam, Diesel Locomotive and Motor Train Operation in a

Lines	Consist	Unit weight	Train-miles per day	A Light weight, tons	B Number of seats	C Full weight, tons	D Hp. per ton (full wt.)	E First costs	F Fuel, lub. oil and water	G Maintenance expenses: Loco's or power cars	H Maintenance expenses: Non-powered cars (At $0.03 per car mi.)
1	5 locals (4 round trips) (steam and 3 old cars)	Loco., 190 T Car, 55 T	1,200	355	288	377	5.8	5x3x$20,000 =$300,000	(At $0.385 per loco. mi.) $ 138,500	(At $0.33 per loco. mi.) $ 118,800	$ 32,400
2	5 expresses (1 round trip) (steam and 6 old cars)	.....	300	520	576	563	3.9	5x6x$20,000 =$600,000	(At $0.358 per loco. mi.) $ 32,200	$ 29,700	$ 16,200
3	5 expresses (1 round trip) (steam and 9 old cars)	.....	300	685	864	750	2.9	5x9x$20,000 =$900,000	(At $0.414 per loco. mi.) $ 37,200	$ 29,700	$ 24,300
3A	*Totals for steam operation*	.....	....	....	....	....	...	$ 1,800,000	$ 207,900	$ 178,200	$ 72,900
4	5 locals (4 round trips) (1,500-hp. Diesel and 3 old cars)	Loco., 120 T Car, 55 T	1,200	285	288	307	4.9	5x3x$20,000 +5x$150,000 =$1,050,000	(At $0.069 per ton mi.) $ 76,300	(At $0.225 per loco. mi.) $ 81,000	$ 32,400
5	5 expresses (1 round trip) (1,500-hp. Diesel and 6 old cars)	.....	300	450	576	493	3.0	5x6x$20,000 +5x$150,000 =$1,350,000	(At $0.04 per ton mi.) $ 17,800	$ 20,300	$ 16,200
6	5 expresses (1 round trip) (1,500-hp. Diesel and 6 double-deck cars)	.....	300	450	852	513	2.9	5x6x$110,000 +5x$150,000 =$4,050,000	(At $0.04 per ton mi.) $ 18,500	$ 20,300	$ 16,200
6A	*Totals for Diesel locomotive operation*	.....	....	....	....	...	...	$6,450,000	$ 112,600	$ 121,600	$ 64,800
7	5 locals (4 round trips) (1 1,000-hp. power car and 2 old cars)	Power Car, 76 T Old car, 55 T	1,200	186	279	207	4.8	5x2x$20,000 +5x$165,000 =$1,025,000	(At $0.069 per ton mi.) $ 51,400	(At $0.19 per car mi.) $ 68,400	$ 21,600
8	5 expresses (1 round trip) (2 1,000-hp. power cars and 4 old cars)	.....	300	372	558	414	4.8	5x4x$20,000 +5x2x$165,000 =$2,050,000	(At $0.04 per ton mi.) $ 14,900	(At $0.19 per car mi.) $ 34,200	$ 10,800
9	5 expresses (1 round trip) (2 1,000-hp. power cars and 7 old cars)	.....	300	537	846	601	3.3	5x7x$20,000 +5x2x$165,000 =$2,350,000	(At $0.04 per ton mi.) $ 21,600	$ 34,200	$ 18,900
9A	*Totals for motor-train operation*	.....	....	....	....	...	...	$5,425,000	$ 87,900	$ 136,800	$ 51,300

and can be justified only where high traffic densities prevail also during off-peak hours. Looking ahead, we must remember that (a) recent developments of electric conversion equipment abroad hold out hope for considerable reduction of first costs; and (b) the frequent schedules economically obtainable by electric trains are helpful in developing the served territory, so that with increasing traffic density incipient losses may change into profits.

Diesel-electric power may be considered a compromise between steam and straight electric power in both cost and desirability of traction characteristics. It can be applied in either of two forms, independent locomotives or motor trains. The two types of the former that are presently available and being applied to commuter service are the 1,500-hp. road switcher and the 2,000- or 2,400-hp. main-line locomotive, the characteristics of both of which are well known.

Characteristics of Motor Trains

The motor train is the second form of Diesel traction and has certain operational advantages over steam or Diesel locomotive-powered trains, including (a) ability to run in either direction, resulting in less switching, less congestion and quicker dispatch at terminals and coach yards; and (b) divisibility into two or more independent units, resulting in flexibility and adaptability to traffic fluctuations, and also permitting more frequent schedules.

Economic advantages include:

1—Fuel saving up to 25 per cent, due to smaller train weights.

2—Saving in first costs up to 30 per cent and more, depending on the percentage of old coaches which must be replaced due to their obsolescence (a power car replaces an old coach anyway).

3—Because of fewer axles, an eventual saving in maintenance costs.

4—Eventually equal and smaller servicing costs, provided that servicing procedure is similar to that of bus barns.

5—Eventual elimination of the fireman as on electric suburban trains or on buses.

Technical Status of Motor Trains

Motor trains offer no major engineering problems any more. They have been widely used in Europe for many years. There is no reason why properly designed motor-train Diesels should be less reliable than those of buses and locomotives. At present, American-built Diesels usable on motor trains do not exceed 500 hp. (continuous load), while 650 hp. capacity, obtained in European motor-train Diesels for many years, is desirable.

Electric transmissions are thoroughly matured, while hydraulic torque converters have recently made such strides that their satisfactory operation appears assured. Vehicle, power plant, transmission and controls form an integrated organic unit. The old mistake of "throwing together" ordinary coaches and power plants with little regard for their integration has been the main reason for previous failures.

Economics of Motor Trains

To appraise the various factors favoring one or the other of the three forms of motive power—steam, Diesel or motor trains—an example will be assumed, which, although hypothetical, is representative of the prevailing suburban systems around larger cities. The assumed system contains the following trains:

1—Five locals of three cars and 300 seats each.

Suburban System

I	K	L	M	N
Engine-house expense	Switching expense	Operating expenses (F+G+H-+I+K)	Capital investment costs	Total costs, (L+M)
(At $0.151 per loco. mi.)	(At $4.00 per 30 loco. mi.)	$ 392,100	$ 30,000	$ 422,100
$ 54,400	$ 48,000			
$ 13,600	$ 12,000	$ 103,700	$ 60,000	$ 163,700
$ 13,600	$ 12,000	$ 116,800	$ 90,000	$ 206,800
$ 81,600	$ 72,000	$ 612,600	$ 180,000	$ 792,600
(At $0.05 per loco. mi.)	(At $3.00 per 30 loco. mi.)	$ 243,700	$ 105,000	$ 348,700
$ 18,000	$ 36,000			
$ 4,500	$ 9,000	$ 67,800	$ 135,000	$ 202,800
$ 4,500	$ 9,000	$ 68,500	$ 405,000	$ 473,500
$ 27,000	$ 54,000	$ 380,000	$ 645,000	$1,025,000
(At $0.06 per power-car mi.)				
$ 21,600	.....	$ 163,000	$ 102,500	$ 265,500
$ 10,800	.....	$ 70,700	$ 205,000	$ 275,700
$ 10,800	.....	$ 85,500	$ 235,000	$ 320,500
$ 43,200	.....	$ 319,200	$ 542,500	$ 861,700

which make four round trips of 60 miles between 6:00 a.m. and midnight; the average distance between stops is one mile.

2—Five expresses of six cars and 600 seats each, and another five expresses of nine cars and 900 seats each. These ten trains make only one round trip of 60 miles during rush hours and lie idle in between. The average distance between stops is five miles.

Table 1 shows the consists and the annual costs (without crew wages) of the 15 trains. In case of steam operation (lines 1 to 3) there are 15 old Pacific-type (4-6-2) locomotives and 90 cars of 96 seats each. All this equipment has been written off, except that for each car $20,000 for reconditioning has been assumed.

For the Diesel locomotive trains (lines 4 to 6), 15 road switchers of 1,500 hp., each costing $150,000, are employed. For each of the old coaches retained, $20,000 is assumed for reconditioning. As a 1,500-hp. locomotive is unable to maintain schedules with nine old coaches, they must be replaced by six new double-deck cars, each having 142 seats and costing $110,000 (line 6). If, instead, 2,000-hp. Diesel locomotives were used, four double-deck cars and three old coaches would be needed.

Motor trains offer a choice of several combinations. Assuming two basic Diesel-generator sets as package units, one with a V-type engine of 500 hp. and the other with a horizontal engine of 250 hp., the following choices exist:

Power car with 500 hp. with one V-type engine mounted in the cab at one end, or with two 250-hp. flat engines mounted under the floor.

Power car with 1,000-hp., with a V-type engine at either end, or with two V-type engines mounted side by side at one end with a 2 ft. 6 in. passage between.

The V-type engine can be removed through the roof or the sides of the car as a package together with the generators. The auxiliary equipment such as radiators and fans are also mounted as subassemblies or packages, so that a power car can be easily converted from a 500- to a 1,000-hp. unit and vice versa.

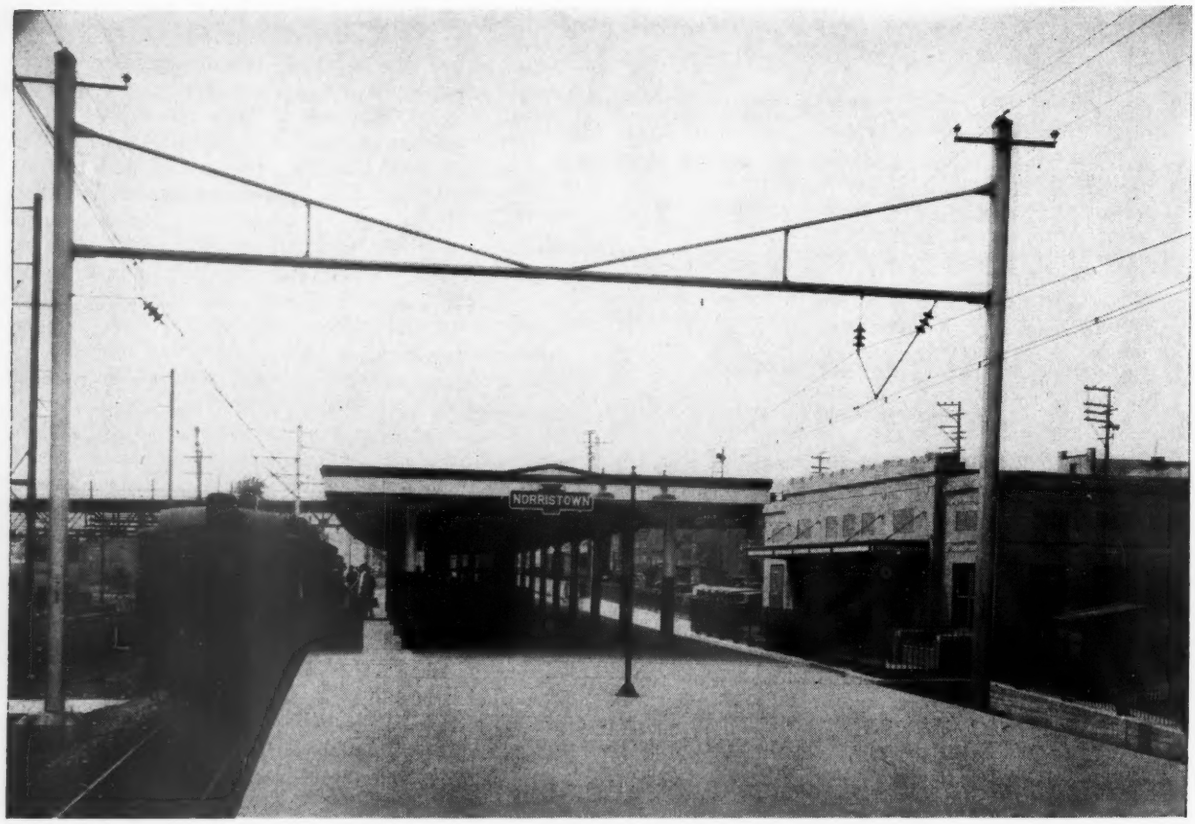
In the present case a power car of standard weight was chosen with a buffing strength of 400 tons and with two 500-hp. Diesel-generator sets mounted side by side. All four axles have traction motors. The car has a light weight of 76 tons, contains 87 seats, and costs $165,000. As seen from Table 1, lines 7 to 9, 25 such power cars and 65 old coaches are needed, the latter to be reconditioned at $20,000 each. A power car and two coaches form a three-car unit. It has a driver's stand at each end and can run in either direction. One such unit forms a local, two form a six-car local or express, while a nine-car express is formed by two three-car units and three old coaches in between. As the power plants are at both ends, a clear passage through the whole train is obtained, and the passengers do not come in contact with the engines.

Based on Actual Performance

The operating expenses of Table 1 are based on actual performance statistics from a number of steam-operated suburban systems. The fuel consumption for Diesel power was obtained by well established scientific methods of traction dynamics. While the fuel consumption per ton-mile of motor trains is slightly higher than that of Diesel-locomotive trains, the latter are burdened by additional switching mileage, so that the fuel per revenue ton-mile is about the same in either case. The maintenance expenses of 19 cents per mile for a 1,000-hp. power car as against 22.5 cents per mile for a 1,500-hp. locomotive have been obtained by a careful analysis of reliable performance data of bus Diesels and foreign motor-train Diesels, making in the latter case due allowance for American conditions. In both cases an average age of five years was assumed.

Looking at the totals (lines 3A, 6A and 9A, column L, of Table I) it will be seen that Dieselization, either in the form of locomotives or motor cars, effects considerable operating savings over steam. At the same time these savings are more than wiped out by the high

This three-cent commemorative postage stamp will be placed on first-day sale at Jackson, Tenn., on April 29. The portrait of Casey Jones, Postmaster General Donaldson says, is used "to symbolize the railroad engineers of America"



Multiple-unit trains make frequent off-hour service possible at relatively low expense

capital investment charges of Dieselization (column M), so that the total costs, when all 15 trains are considered (column N, lines 3A, 6A, 9A) are lowest for steam and highest for Diesel locomotives, with motor trains in the middle. This would indicate that Dieselization of the entire system cannot be justified on economic grounds alone.

But this is not the complete story. There are a number of factors which must now be taken into account and which will reveal that under certain conditions at least a partial Dieselization may be justified. We consider, therefore, the following four cases:

Dieselizing the Local Trains

Case I—Assuming that only the five locals of Table I be Dieselized, column N, lines 1, 4 and 7, indicates definite savings by Diesel locomotives, and still more so by motor trains. Transferring the pertinent figures of these lines to Table 2, lines 1, 2 and 3, shows that the return on the investment spent in excess of that needed in the case of steam operation is 9.8 per cent for Diesel-locomotive trains and 21.6 per cent for motor trains. If the Diesel locomotives can be used at night for other purposes, only one-half of the annual capital investment charges of any locomotive thus used, or $7,500, will be chargeable to suburban service. To break even with motor train operation, line 3, column P, 83,-200/7,500, or 11 Diesel locomotives must find employment at night. As there are only five locomotives, it is obvious that motor trains remain more economical than Diesel locomotives.

Case II (*a*)—Because of the faster dispatch of motor trains the number can often be reduced. As one example, the locomotive train makes the roundtrip in four hours (two hours running time plus one hour at each terminal for unloading, backing out, switching, backing in and loading) as against three hours for the motor train (two hours running time plus ½ hour at each terminal for loading and unloading). Three motor trains can then do the work of four locomotive trains, so that not five, but only four motor trains would be required. Consequently, the first costs would be reduced by the cost of one motor train, or by $205,000, resulting in a return on the investment spent over that needed for steam operation in the amount of 34.1 per cent (Table 2, line 4), which is quite attractive.

Case II (*b*)—As in (a), it may be possible to reduce the number of trains from five to four also in case of Diesel locomotive trains, provided that the latter have a driver's cab in the last coach, and that the locomotive be allowed to push the three coaches in one direction. This case is represented by line 5 and shows a fair, yet smaller, return on the investment than the four motor trains. Even if all four locomotives could be used at night for switching purposes, line 4, column P reveals that the motor trains remain more economical, as dividing 46,700 by 7,500 shows that six locomotives would have to be used in switching service to equal the savings by motor trains, and only four are available.

Table 2—Annual Dollar Expense of Locals of Table 1 for Several Typical Cases

	A	B	E	L	M	N	O	P	Q
Lines	Cases	Train consists	First costs	Operating expenses	Capital investment charges	Total expense (L+M)	Total saving over steam operation	Total saving over Diesel locomotive operation	Return on investment, per cent
1	I	5 steam locals (old coaches)	$ 300,000	$392,100	$ 30,000	$ 422,100	.....	.....	.....
2	I	5 Diesel loco. locals (old coaches)	$1,050,000	$ 243,700	$ 105,000	$ 348,700	$ 73,400	.....	9.8
3	I	5 motor train locals (old coaches)	$1,025,000	$ 163,000	$ 102,500	$ 265,500	$ 156,600	$ 83,200	21.6
4	II (a)	4 motor train locals (old coaches)	$ 820,000	$ 163,000	$ 82,000	$ $245,000	$ 177,100	$ 103,700[1] $ 46,700[2]	34.1
5	II (b)	4 Diesel loco. locals (old coaches)	$ 840,000	$ 207,700	$ 84,000	$ 291,700	$ 130,400	.....	24.1
6	III (a)	5 steam locals (new coaches)	$1,275,000	$ 392,100	$ 127,500	$ 519,600	.....	.....	.....
7	III (a)	5 Diesel loco. locals (new coaches)	$2,025,000	$ 243,700	$ 202,500	$ 446,200	$ 73,400	.....	9.8
8	III (a)	5 motor train locals (new coaches)	$1,675,000	$ 163,000	$ 167,500	$ 330,500	$ 189,100	$ 115,700	47.3
9	III (b)	4 motor train locals (new coaches)	$1,340,000	$ 163,000	$ 134,000	$ 297,000	$ 222,600	$ 149,200[3] $ 72,700[4]	343.0
10	III (c)	4 Diesel loco. locals (new coaches)	$1,620,000	$ 207,700	$ 162,000	$ 369,700	$ 149,900	.....	43.5

[1]As compared with line 2.
[2]As compared with line 5.
[3]As compared with line 7.
[4]As compared with line 10.

Table 3—Annual Dollar Expense of All Trains of Table 1 for Several Typical Cases

	A	B	E	L	M	N	O	P	Q
Lines	Cases	Train consists	First costs	Operating expenses	Capital investment charges	Total expense (L+M)	Total saving over steam operation	Total saving over Diesel locomotive operation	Return on investment, per cent
1	IV (a)	Steam trains with 24 new double-deck cars	$3,740,000	$ 602,100	$ 374,000	$ 976,100	.....	.....	.....
2	IV (a)	Diesel loco. trains, from Table I, line 6A	$6,450,000	$ 380,000	$ 645,000	$1,025,000	$ --48,900	.....	none
3	IV (b)	Motor trains, 25 power cars, 10 new trailers, 55 old trailers	$6,075,000	$ 319,200	$ 607,500	$ 926,700	$ 49,400	$ 98,300	2.1
4	IV (b)	Motor trains: 4 locals, 4 6-car expresses, 4 9-car expresses, 20 power cars and 52 old trailers	$4,340,000	$ 350,500	$ 434,000	$ 784,500	$ 191,600	$ 240,500[1] $ 108,900[2]	32.0
5	IV (c)	Diesel loco. trains: 4 locals, 4 6-car expresses, 4 9-car expresses, 12 locomotives, 24 old coaches, 24 double-deck cars	$5,160,000	$ 377,400	$ 516,000	$ 893,400	$ 82,700	.....	5.8

[1]As compared with line 2.
[2]As compared with line 5.

Case III (a)—assumes that with either steam, Diesel or motor trains, only new coaches will be used. Steam and Diesel locomotive operation would then require 15, and motor-train operation only 10 new coaches, as the power cars are new coaches in themselves. Assuming $85,000 for each new coach, the costs will be as shown by Table 2, lines 6 to 8. While the return on the investment of Diesel locomotive trains spent in excess of that for steam trains remains as in Case I at 9.8 per cent, it increases for motor trains to 47.3 per cent.

Case III (b)—assumes as does Case II b that due to faster dispatch only four instead of five motor or Diesel-locomotive trains will be needed. Line 9 shows that the first costs of the motor trains are almost as low as those of the steam trains, line 6, while the total annual costs are only 57 per cent of those of steam operation, resulting in a return on the investment of 343 per cent. In contrast to this, line 10 reveals that Diesel locomotive trains yield only 43.5 per cent and that, even if all four locomotives could be used at night, motor trains remain more economical.

Case IV returns to the entire system of Table I, and considers the fact that on many suburban systems 30 to 40 per cent of the existing coaches are so obsolete that replacement, rather than reconditioning, is in order.

Assuming in the hypothetical example that 35 coaches are obsolete out of a total of 90, steam operation would require the purchase of 35 single-deck coaches of $85,000 each or of 24 double-deck coaches of $110,000 each. Choosing the latter as the cheaper plan and also taking into account a reduction of fuel and car maintenance expenses of $10,500 due to double-deck construction, the figures of Table 3, line 1, take the place of those of Table 1, line 3A. In the case of Diesel-locomotive trains (Table 3, line 2), the figures from Table 1, line 6, are repeated because the 30 double-deck cars already take care of the replacement program. In the case of motor trains (Table 3, line 3), 25 power cars, 10 new cars and 55 old cars would be involved.

Table 3, column O, line 2, reveals that Diesel locomotive operation remains economically inferior to steam, while motor trains (line 3) yield at least a moderate saving. In analogy to Case II and with reference to Table 3, line 3, Column P, 98,300/7,500, or 13 Diesel

locomotives—more than are available—must find use at night to break even with motor trains.

Case IV (b) is a study of actual schedules which show that there are cases where the quicker dispatch of motor trains would permit a reduction not only of the number of locals, but also of certain expresses, as some of them can make two, instead of one trip, thereby picking up a second rush-hour load. Assuming that in the case of motor trains one local, one six-car express, and one nine-car express could be dispensed with, the costs, including the expenses of the non-revenue return trips, would be as shown by line 4 of Table 3, resulting in a 32.0 per cent return on the investment spent in excess of that necessary for steam operation.

General Conclusions

To obtain the same reduction of train numbers with Diesel locomotives the two trains making two round trips must have on the first inbound and outbound trips a second locomotive as a pusher in order to obtain a quick return. An operator's cab in the last coach would not be a satisfactory solution in this case as it might be for a three-car local because it is impractcial to push more than three cars at revenue-service speeds because of flange resistance on curves. At the end of this non-revenue return the pusher locomotive takes over its regular train. The costs for this swing-locomotive operation are shown on line 5 of Table 3. To break even with motor trains, 108,900/7,500, or 14, Diesel locomotives must find full employment during off-peak hours, which is impossible as there are only 12 locomotives available.

All-out Dieselization of an entire suburban system with heavy rush-hour service cannot be justified on the ground of direct savings, excepting those cases in which at least one-third of the existing coaches must be replaced anyway for reasons of obsolescence. In these cases motor trains may become attractive, if, at the same time, because of quicker dispatch at terminals, the number of trains can be reduced. Although this can be also accomplished with Diesel locomotives, they do not measure up with motor trains, unless all or most of these locomotives can be used during off-peak hours for other purposes.

Dieselization of steam-operated locals or shuttle trains can be economical only if these trains are kept busy during a large part of the day. In most of these cases motor trains are economically superior to Diesel locomotive trains.

If all coaches are to be replaced by new ones, or if a line with entirely new equipment is to be installed, motor trains are definitely the most economical type of equipment.

Indirect savings not included in the above analysis and obtainable by motor trains are (a) less congestion at terminals; (b) more frequent schedules, thereby soliciting more commuters; and (c) if later electrification should take place, the rolling stock would require only small changes.

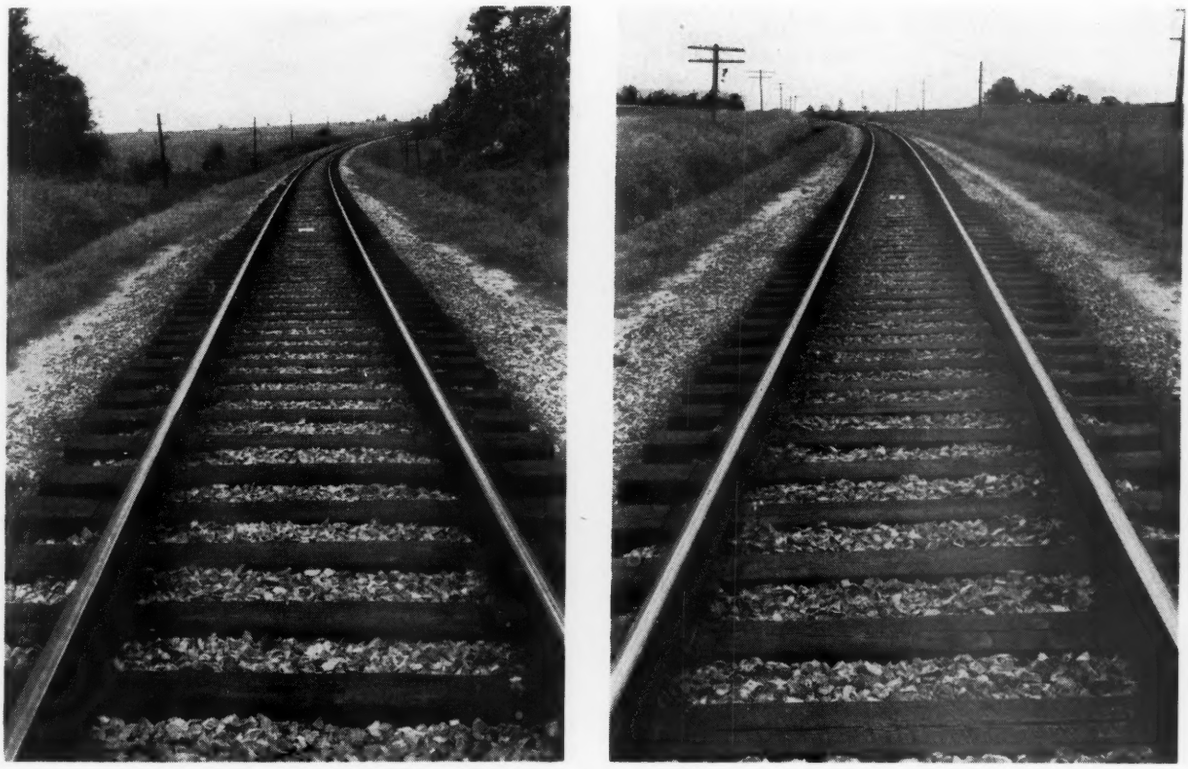
The above conclusions must not be construed as a rigid rule. They reflect, however, a trend pattern which shows that motor trains have definite possibilities and that they may yield fair returns on the investment. Similar though slightly smaller savings, but with still greater flexibility, can be obtained if 500- to 600-hp., instead of 1,000-hp., power cars are used.

26,563 Freight-Train Cars Reported Ordered in 1950

Orders for 4,980 freight-train cars for domestic use have been reported in *Railway Age* since publication of the previous Freight Traffic Issue on March 25, increasing to 26,563 the number of cars reported ordered so far this year. The new orders, plus those reported earlier, are listed by purchaser in the accompanying table.

Purchaser	No.	Type
Atchison, Topeka & Santa Fe	500	50-ton Box
Central of Pennsylvania	125	70-ton Hopper
Chicago & Eastern Illinois	25	70-ton Cov. Hopper
Chicago, Burlington & Quincy	1,900	50-ton Box
	600	70-ton Triple Hopper
	200	70-ton Hopper
Chicago, Rock Island & Pacific	1,000	50-ton Box
Delaware, Lackawanna & Western	300	70-ton Cov. Hopper
Detroit, Toledo & Ironton	250	50-ton Box
Equitable Life Assurance Co.	700*	50-ton Pulpwood
	600*	70-ton Cov. Hopper
Fruit Growers Express	100	50-ton Refrigerator
Gulf, Mobile & Ohio	100	70-ton Cov. Hopper
Lake Superior & Ishpeming	50	55-ton Box
Lehigh & New England	35	70-ton Cov. Hopper
Lehigh Valley	100	70-ton Cov. Hopper
	500	50-ton Box
	1,000	50-ton Box
	50	70-ton Flat
Louisville & Nashville	1,000	50-ton Box
Mather Stock Car	130	40-ton Refrigerator
Minneapolis, St. Paul & Sault Ste. Marie	75	70-ton Cov. Hopper
Missouri-Kansas-Texas	500	50-ton Box
Missouri Pacific	610	70-ton Hopper
	500	50-ton Box
New York Central	3,000	55-ton Box
	1,500	70-ton Gondola
Norfolk & Western	1,000	70-ton Hopper
Northern Pacific	500	50-ton Box
	50	Caboose
Reading	1,000	50-ton Hopper
	500	50-ton Box
St. Louis-San Francisco	40	70-ton Cov. Hopper
Seaboard Air Line	300	70-ton Phosphate
Southern Pacific	2,000	50-ton Box
	1,000	50-ton Auto
	100	70-ton Gondola
Spokane International	23	70-ton Cov. Hopper
Union Pacific	2,500	50-ton Box
	500	40-ton Stock
	1,000	50-ton Gondola
Western Fruit Express	450	50-ton Refrigerator
	50	Refrigerator
Wilson Car Lines	100	40-ton Refrigerator

*To be leased to the Atlantic Coast Line.



Vapor-dried ties (left) and air-seasoned ties (right) six and one-half years after installation on the Asheville division of the Southern

SIX YEARS OF VAPOR-DRIED TIES

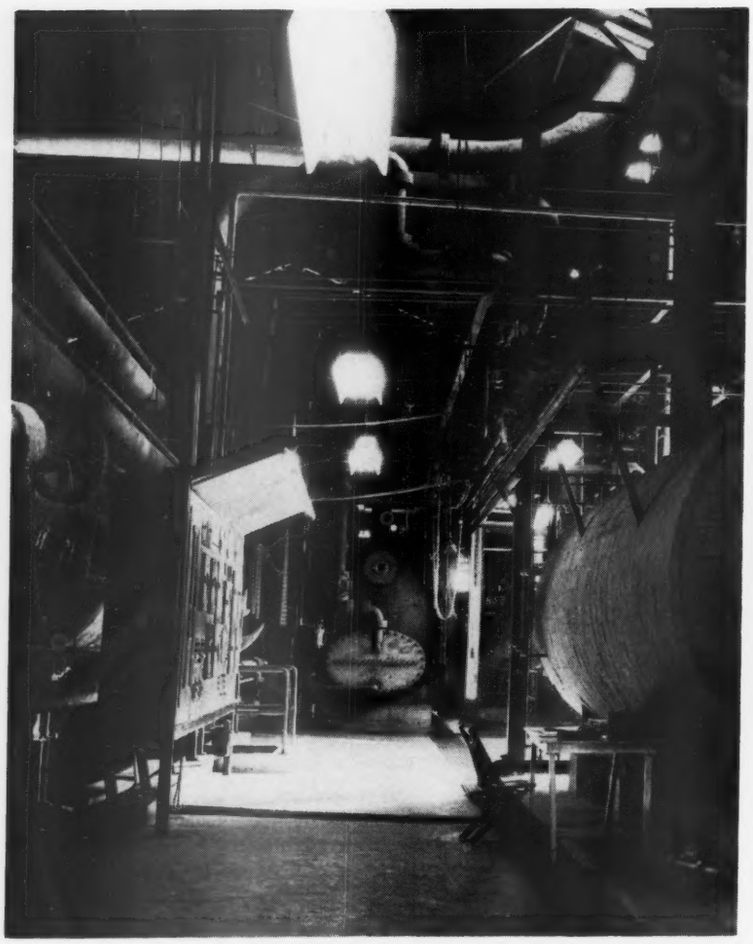
Test results promise longer and more economical service life—Plant renovation and expansion point to wider application of this process to such products as poles, timber and lumber

By C. MILES BURPEE
Vice-President
Simmons-Boardman Publishing Corporation

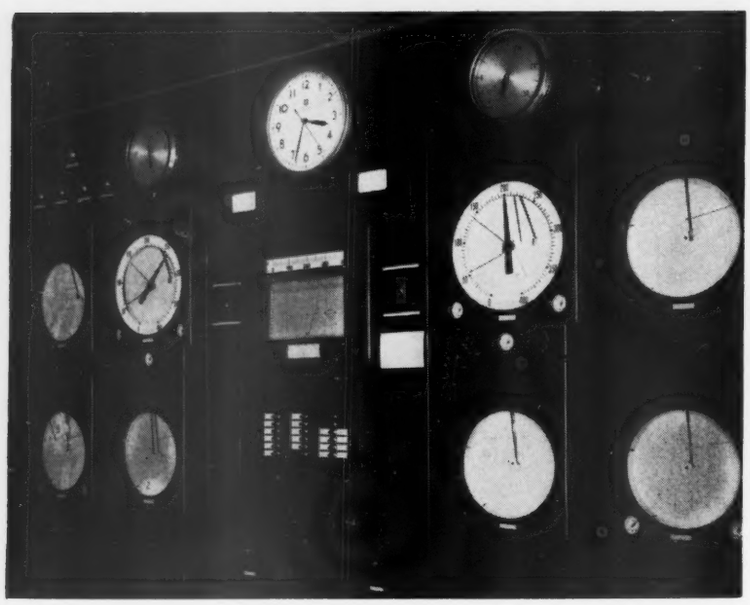
Longer service life and lower annual costs for crossties, together with satisfactory utilization of less desirable timber species through the vapor-drying process, are the objectives of primary interest to railway officers in conjunction with the revamping and reorganization of the wood-preserving plant of the Taylor-Colquitt Company at Spartanburg, S.C., recently completed at a cost of some $750,000. All of the plant's 25 years have been marked by steady progress in research and the design and development of machines and methods for the production of better and more efficient products. Among the most interesting and promising developments is the method for artificially seasoning wood, known as the vapor-drying process, which was described in *Railway Age* of March 16, 1946.

Now, after five years of commercial production at the parent plant, three additional plants have been equipped for vapor-drying, that of the Norfolk & Western at Radford, Va., and two in New Zealand and Australia. Both "down-under" plants are for drying lumber for general purposes. Operating experience during the last five years has resulted in a number of improvements which have materially simplified the equipment required for the conversion of treating cylinders to perform the additional duty of vapor-drying. The new and renovated plants have been equipped accordingly.

Eleven railways in the United States have installed vapor-dried crossties of oak and gum in tracks for test purposes. The oldest of these have been in service for six and one-half years on the Asheville division of the Southern. Because of the unique method of relieving seasoning stresses, these ties show an appreciable reduction in checking compared with air-seasoned ties



This panel control board (left center, above; shown in detail below) is the heart of the vapor-drying and treating plant, including among other instruments several electronic devices, furnished by the Brown Instrument Company, to assure definite control of all steps in the process. The entire plant is designed to be operated by one man and a helper



from the same general production area which were treated with the same type preservative and placed in the same track at the same time.

Long Range Economies Apparent

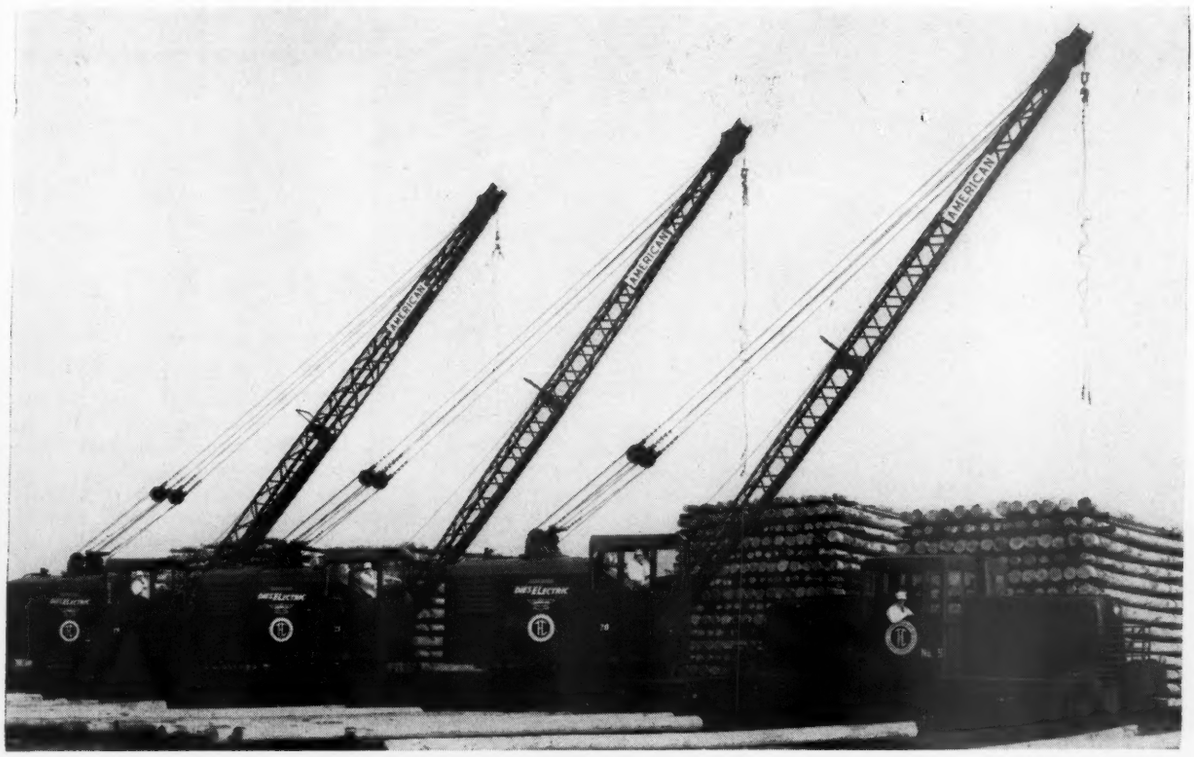
In considering the adoption of the vapor-drying process, which reduces the seasoning period of crossties from a matter of months to a few hours, one railway, for instance, made a thorough and careful investigation which revealed estimated immediate annual savings of $45,000 on the vapor-drying treatment of 600,000 hardwood crossties. These estimates included plant depreciation and upkeep costs for a $216,000 vapor-drying installation for two treating cylinders.

In addition to these immediate annual savings, railway engineers also estimated that the new process will add a minimum of three years service life to the crossties, compared with air-seasoned stock. Proceeding on the basis of treating 600,000 hardwood ties each year, the railway estimate concluded that, by reason of the added life and the scaling down of seasoning and treating costs, vapor-drying would result in a saving of $8,400 the first year, $16,800 the second year, $25,200 the third year, etc., or an average annual saving of $126,000 per year for 29 years.

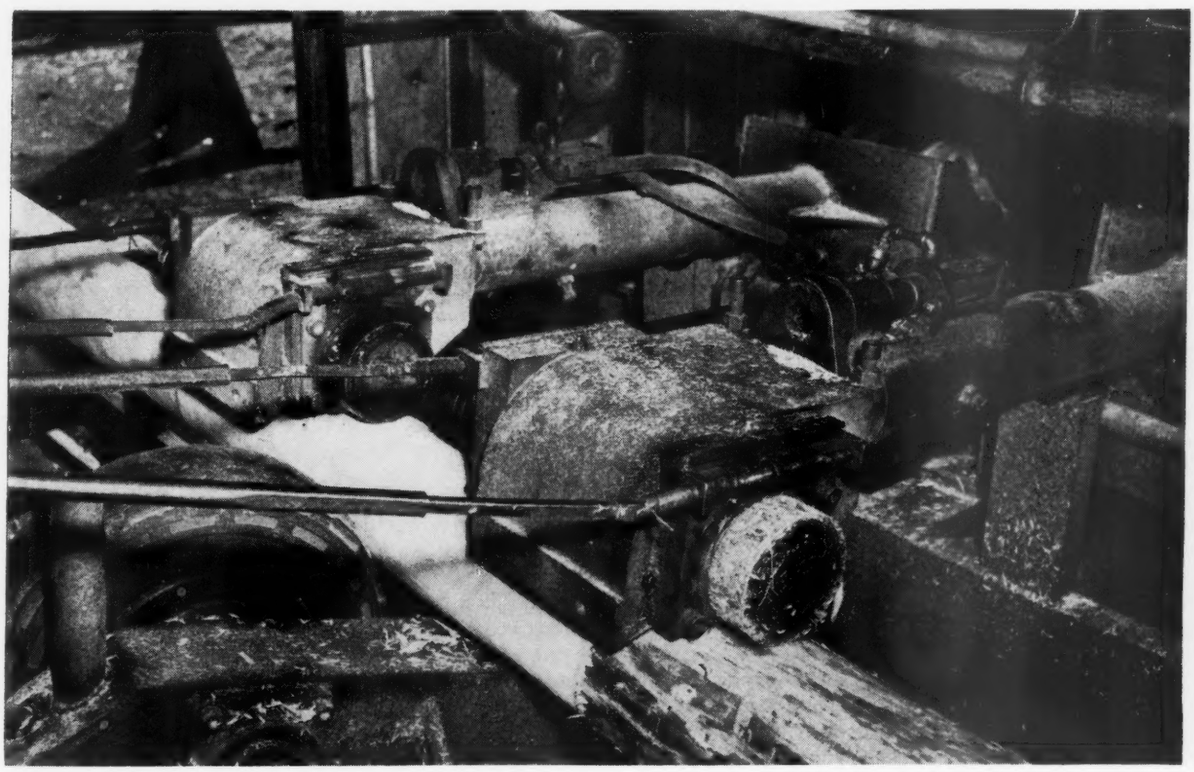
This particular estimate of immediate annual savings included such items as: the reduction of the number of ties to be doweled, the elimination of losses during the long air-seasoning period, the elimination of interest on the investment in ties during air-seasoning and the reduction in fire insurance because of reduced stocks in the air-seasoning yard. Deductions included all additional costs involved in vapor-drying as well as depreciation and upkeep costs of the vapor-drying equipment.

The vapor-drying cycle, as now established at the Spartanburg plant, comprises a drying period ranging from 12 to 14 hours, followed by a vacuum of 2 hours, and 4 hours for treating and final vacuum. Thus, the total time for the process ranges from 18 to 20 hours, depending on the species of wood, moisture content of the ties and plant boiler pressure available.

Taylor-Colquitt research has not been restricted to vapor drying by any means. In revamping the plant at Spartanburg, the laboratory research facilities were expanded and



Above—Dieselization pays off in railway supply industries too. Taylor-Colquitt's steam motive power has been replaced entirely with Diesel-electric units. Shown here are a 44-ton General Electric Diesel-electric locomotive and three of five 25-ton Diesel-electric cranes built by American Hoist & Derrick Co. Used principally for handling poles, these cranes replaced six of the old steam type. Faster handling has resulted in the elimination of one shift in the pole yard where two shifts now handle work that previously required three. Below—Close-up of the rough and finishing cutter heads of the Taylor-Colquitt pole peeling machine. The pole is rotated by a series of rollers and emerges in good condition for treatment, with knots, rough spots and inner bark removed



This multiple drill, a slab gainer and a pole peeling machine have stepped-up production in the pole yard 10 to 1 over the hand methods used 20 years ago

improved so that several important experiments usually are in process at the same time. Of these, the most intriguing at present are being made with dimensional lumber, principally softwoods, and the application of vapor drying to such material to reduce treating costs and speed up output. Essentially Taylor-Colquitt is engaged in selling a service instead of a process. The primary object of the research program is the improvement of products and the conservation of forest resources through better and more thorough treatment, as well as the use of species that now have little or no commercial value because of certain detrimental characteristics. All present a broad field for continued research, for example, preventing the bleeding of knots in yellow pine following treatment, improving the depth of penetration and distribution of preservative in fir timbers, and overcoming the susceptibility to early decay of both black and sweet gum. One project in particular that promises to have far-reaching effects in the wood preserving industry is that of solvent recovery from wood treated with oil-borne preservatives. This process assures satisfactory paintability of wood treated with such preservatives as copper naphthenate and pentachlorophenol, as well as effecting substantial savings in cost of treatment through recovery of solvent.

The renovation of the Spartanburg plant now provides greater general treating efficiency. Not only does a new boiler plant provide an abundant supply of steam, but the rearrangement of all the treating equipment and the simplification of all piping has stepped up operating efficiency and reduced maintenance costs. Each of five treating cylinders now has its own working tank, condenser and pressure pump in addition to two filling pumps that serve all cylinders. This simplification of the arrangement now makes it possible for one operator and a helper to handle vapor-drying and preservative treatment as well. With the exception of the instrument panels all of the electrical control equipment has been isolated for safety and cleanliness in a brick-and-tile building at the rear of the treating room.

Machines Speed Pole Production

The modern pole yard evidences probably a greater advance in the preparation, handling and manufacture of poles prior to treatment than almost any other phase of plant work. It was at the Spartanburg plant, for instance, that one of the first and subsequently most popular types of pole-peeling machines was developed. It has been improved through the years, and the present equipment represents the latest development along these lines. Together with a slab gainer and a multiple drill the pole-peeling machines have stepped up production ten to one over the conventional methods that were in use 20 years ago.

GENERAL NEWS

Railroads' Contribution to National Income Continues to Decline

"Monthly Comment" indicates 1949 situation; also shows that railroads last year were 14 times as safe as air lines

The railroad contribution to national income in 1949 continued the "declining trend" characteristic of the past 20 years, according to the latest issue of "Monthly Comment" prepared by the Interstate Commerce Commission's Bureau of Transport Economics and Statistics. This decline, amounting to 51 per cent for the 1929-49 period, was reported in the "Comment" in the first of this month's articles. Another article in the issue pointed out that in 1949 rail travel was relatively 14 times safer than air travel while other sections discussed the decline in "quick assets" during the past year, compared mail and express revenues for the 1941-49 period, and reviewed the situation with respect to employee compensation.

In discussing the "income produced" by Class I roads (i.e., compensation to employees plus earnings on capital), the I.C.C. bureau said the rail share of national income fell from 5.3 per cent in 1929 to 2.59 per cent in 1949. There was a decline of 30.7 per cent during the relatively good period of 1940-49. The bureau examined the distribution made by the roads of their share of 1949 income and found that 81.4 per cent was paid to employees, the highest percentage of any year except 1946, while the remaining 18.6 per cent went to the "earnings on capital" account.

The reduction in "earnings on capital" during 1949 was absorbed by a drop of 12.5 percentage points in business savings. Roads maintained dividend payments, however, with a slightly greater percentage of the earnings being so distributed in 1949 than in 1948. While discussing earnings on capital, the "Comment" article went on to compare the 1946-49 average of such earnings with that for the four years after World War I. It was found that although the average income produced in the more recent period was 44 per cent greater than after the first world war, the increase in earnings on capital was only 5.4 per cent. Increasing labor costs during the period accounted for the balance.

Rail vs. Air Safety

The article comparing safety records of railroads and domestic air carriers made comparisons on the basis of fatalities per billion passenger-miles. Pointing out that the annual rail fatality rate has shown a "decided downward trend" since 1943, the Comment said that "throughout the history of air travel the rate of passenger fatalities in terms of passenger-miles has been very much higher than that for travel by rail."

During 1949 the air line fatality rate per billion passenger-miles averaged 13.1 as against 0.91 for rail carriers. This marked an all time low for the railroads, while the air carrier average was above the 11.9 record set in 1939. Both types of transport recorded a decline from their 1948 averages. The bureau said that with some "random fluctuations" the rate of air travel fatalities has shown "a pronounced downward trend" over the past 20 years.

Another study with respect to the railroad financial situation contained in this issue of the "Comment" was one comparing "quick assets" and "net corporate working capital" for Class I roads as of January 31, 1950, and 1949. Defining "quick assets" as the amount of cash and temporary cash investments, the bureau reported a decline of about $330.2 million, or 17.2 per cent, in this account in the past year. The drop was from $1,924.7 million on January 31, 1949, to $1,594.5 on the same date in 1950. It was pointed out, however, that "quick assets" on the latter date were sufficient to cover 92.6 per cent of the total current liabilities, whereas the corresponding percentage a year ago was 92 per cent. In both the Southern region and Western district the "quick assets" exceeded current liabilities on January 31.

Drop in Working Capital

The net corporate working capital (current assets less current liabilities) for Class I roads as a whole dropped 12.5 per cent in the past year. The bureau found that "sharp declines" occurred in each of the territories, ranging from 9.3 per cent in the west to 30.4 per cent in the Pocahontas region. It was pointed out, however, that by excluding material and supplies, the net working capital for Class I roads dropped only 8.1 per cent since January 31, 1949. This smaller decline when these items are excluded "emphasizes the decrease in the material and supplies account between the two periods," the bureau said. The latter decrease amounted to about 16 per cent, it added.

Turning to its review of mail and express revenues, with comparison to earlier periods, the bureau said that mail revenues for the first two months of 1950 were 0.9 per cent above the same period in 1949. For the same period, payments to Class I roads by the Railway Express Agency declined 12 per cent. Mail revenue for the year 1949 amounted to $222.8 million, and was 105.9 per cent above that of 1941. Meanwhile, express revenues in 1949 were the lowest since 1941, having dropped 32.4 per cent in one

Firemen Set April 26 Strike Date

Representatives of the three regional Carriers' Conference Committees received word from D. B. Robertson, president of the Brotherhood of Locomotive Firemen & Enginemen, late on April 19 that a strike would become effective at 6 a.m. Wednesday, April 26, "starting" with the following lines:

Pennsylvania, west of Harrisburg, Pa.;
New York Central, west of Buffalo, N. Y., including the Michigan Central west of the Detroit river, the Big Four and the Ohio Central;
Atchison, Topeka & Santa Fe, including the Coast Lines, and Southern

The strike was called, according to Mr. Robertson's notice, because his union "failed in our efforts to induce the Carriers' Conference Committees to make any concessions in the interest of a settlement" of the organization's demand for a second fireman on road Diesel-electric locomotives. A Presidential emergency board heard the firemen's case at New York from June 27, 1949, through August 23, and, on September 19, submitted to the President its categorical recommendation that the demand for a second Diesel fireman "be denied." This recommendation paralleled that of a board which, earlier the same year, denied a Brotherhood of Locomotive Engineers' demand for a second engineman on Diesels, and a 1943 fact-finding board which held that there was no need for either an extra fireman or extra engineman in the cabs of Diesel locomotives.

D. P. Loomis, chairman of the Association of Western Railways, stated that the carriers have no intention of yielding to the make-work demands of the brotherhood.

Traffic representatives of major Southern California manufacturers, utility companies and produce growers met recently with officers of the Chicago & Eastern Illinois at Los Angeles to discuss west coast and midwest freight shipping problems. Present were (seated, left to right) R. B. Bell, western traffic manager, Aluminum Company of America; L. E. Olson, western traffic manager, Great Lakes Carbon Company; Will Hays, director, C. & E. I.; C. M. Roddewig, president, C. & E. I.; L. E. Kilmer, general agent, C. & E. I.; E. J. Roddewig (C. M. Roddewig's father), and Frank Wickhem, Los Angeles attorney; (standing, left to right) F. E. Sonnenberg, assistant general traffic manager, Carnation Company; H. R. Sampson, vice-president, C. & E. I.; R. C. Neill, traffic manager, California Fruit Growers Exchange; R. E. Taylor, traffic manager, Southern California Gas Company; H. J. Letts, traffic manager, Southern California Edison Company; C. S. Connolly, general traffic manager, Carnation Company; W. E. Maley, traffic manager, Pacific Coast Borax Company, and J. P. Curry, traffic manager, California Walnut Growers Association

year. The bureau noted that this large decline "occurred despite the fact that this commission has authorized several substantial increases in express rates since 1945." In connection with mail revenues, it was noted that only one increase in mail pay has been granted, that being the 25 per cent "interim" increase authorized in 1947.

Average Hourly Wages

A table included in the article on compensation of railway employees illustrated the steady rise in average hourly wages paid by railroads since 1939. On an annual basis it was shown that the January 1950 average wage of $1.549 per hour was 114.8 per cent higher than the average of $0.721 per hour paid in 1939.

The table also pointed up the increasing percentage of operating revenues now being absorbed by the payroll. The total payroll in 1939 took 46.6 per cent of the operating revenues. By 1949 the percentage had risen to 51.5 per cent, and for January, 1950, the payroll took 54.3 per cent of operating revenues.

The bureau said the increased average earnings per hour were "largely the result of postwar wage awards." Average hourly wages increased from $0.916 in 1945 to $1.415 in 1949, or 54.5 per cent. The bureau added that the "full effect of all increases effective to date" is reflected in the average hourly earnings reported for January, 1950.

Also included in the Comment was a discussion of the condition of railway equipment. It was noted that the "per cent unserviceable" of rolling stock at the end of January, 1950, was "not nearly as favorable" as on the corresponding date in any year 1946-49. On January 31 the percentage of home cars unserviceable was 13.7 per cent, or 4.8 percentage points higher than on the same date in 1949. The percentage of railway-owned passenger-train cars classed as unserviceable rose from 6.9 in January 1949 to 8.0 in January 1950. There was also an increase in the number of unserviceable yard service and road freight and passenger service locomotives, but the bureau said this increase "presumably" was caused by the sharp decline in traffic as compared with January of prior years.

Eastern Roads Defend Iron, Steel Rate Cut

Reductions opposed by motor carriers and water lines

The proposal of Eastern railroads to reduce rates on certain iron and steel products to meet truck competition was argued April 18 before the Interstate Commerce Commission in Washington, D. C. Presented before eight members of the commission, the railroad case was designed to show need for lower rates to halt diversion of an ever-increasing volume of the traffic to motor carriers.

Opposition testimony offered by motor carrier groups and others was to the effect that the proposed rates were not justified by any "emergency" situation. They also argued that the proposed rates were unlawful, that they were an attempt to contravene existing commission orders, and that they should be suspended.

The Eastern roads had asked for this hearing before the commission prior to the effective date of the new rates in an effort to avoid such a suspension. As noted in *Railway Age* of April 8, page 56, the roads seek to make the new rates effective on 10 days' notice. The new rates amount to a reduction of approximately 25 per cent.

Cites Recent Traffic Study

Edward A. Kaier, general attorney of the Pennsylvania, presented the railroad case. He said the Eastern roads made a traffic study in December, 1949, and found that motor carriers were transporting an average of 52.2 per cent of the iron and steel products included in the study. He added that in certain items trucks were moving an even greater percentage of the traffic, and that diversion to trucks is continuing "at an accelerated rate."

Mr. Kaier told the commission that the new rates proposed by the railroads were an effort to stop this diversion. He said the roads "must rely to a great extent" on the revenue produced by transporting the iron and steel articles, and yet the roads were presently transporting less than one-half of that traffic. On the basis of what was learned in the traffic study, he said the new rates would reduce revenue slightly at first but that increased traffic would more than make up the difference.

The railroad argument continued by noting that present rail rates are "substantially higher" than motor carrier rates, and then declared that trucks have been free to adjust their rates to obtain the more desirable traffic. Mr. Kaier pointed out that the new rail rates would be confined to articles on which there is substantial movement by truck, but added that the motor carriers would still have the advantages of speedier delivery and a minimum weight of 20,000 to 40,000 lb. The proposed rail rates are based on minimum carload weights of 80,000 lb.

Shippers Support Reduction

In concluding his argument, Mr. Kaier said that shippers attending a public hearing on the proposed new rates in Pittsburgh, Pa., on March 9 had supported the reduction. He said the new rates would still be in excess of minimum rates prescribed by the commission, and added that they would comply with the commission's admonition in Ex Parte 168 that railroads should take steps, both in pricing and service, to retain and increase traffic.

Principal objection to the railroad argument was made by John R. Turney, appearing on behalf of the Association of Highway Steel Transporters. He attacked the traffic study made by the railroads and said it "does not fairly re-

flect the relative proportions of the traffic." He said the test accounted for only 50 per cent of the actual rail traffic, and that motor carrier traffic "is overstated almost as much as the rail is understated."

Mr. Turney urged the commission to suspend the proposed rates, and to institute a general investigation of the rates and charges of railroads, and motor carriers, common and contract, in Official territory. Meanwhile, he asked that the railroads be permitted to restore, effective May 1, rates on iron and steel articles that were in effect prior to the Ex Parte 168 increase. He said the motor carriers have pending a 20 per cent rate increase on this traffic that will go into effect May 1, and by permitting the railroads to knock off the 168 increase the rates will then be on a parity basis.

Charts Compare Rail-Truck Rates

A statement submitted in connection with Mr. Turney's argument contained charts comparing present rail and truck rates, and the anticipated effect of the proposed rail rates on rail revenue. In contrast to the railroad argument that additional traffic would easily offset the loss in revenue coming from lower rates, the figures presented by Mr. Turney indicated the rail carriers would have to capture approximately 31 per cent of present truck traffic to realize revenues equal to the present. Earlier in the same statement it had been stated that "at the same rates, any assumption that the rails would capture 30 per cent or more of the truck traffic is fantastic."

Other contentions by Mr. Turney were that the railroads were trying to create an emergency situation that did not exist, and, furthermore, the proposed rates were unlawful. He said the proposed rail rates should be suspended pending an investigation of their lawfulness. He said the highway steel transporters "seek neither rate advantages nor subsidies, direct or indirect."

Mr. Turney's argument was supported by Edgar Watkins, attorney for the Middle Atlantic States Motor Carrier Conference. Mr. Watkins said the action of the rail carriers in proposing lower rates "is predicated upon an emergency" where none exists. He said that if the rates were not suspended "an emergency will then exist," and he argued that the rates were "unnecessarily low." He also asked that a general investigation be made of rates of carriers of iron and steel commodities to determine the need of a minimum rate order.

Water Carriers Also Object

J. H. Eisenhart, Jr., representing the American Waterways Operators and the Great Lakes Shipowners Association, disputed the railroad contention that the new rates were not designed to meet water carrier competition. In answer to the railroad claim that the new rates still "will be generally higher" than water carrier rates, Mr. Eisenhart said the difference in overall cost between rail and water for a movement between Cleveland, Ohio, and Detroit, Mich., would be only 40 cents a ton under the proposed railroad rates.

Mr. Eisenhart went on to assert that the water lines have been losing iron and steel tonnage faster than the railroads. The commodities on which the proposed railroad reductions would apply "might be called natural waterborne traffic," he said. The railroads, he added, have been "kicking" the water carriers off one by one—"commodity-wise and territory-wise." He has "reason to believe," so he said, that railroads in other territories will also reduce rates on iron and steel articles; and he is "informed" that the railroads are planning "wholesale reductions" in rates on sulphur.

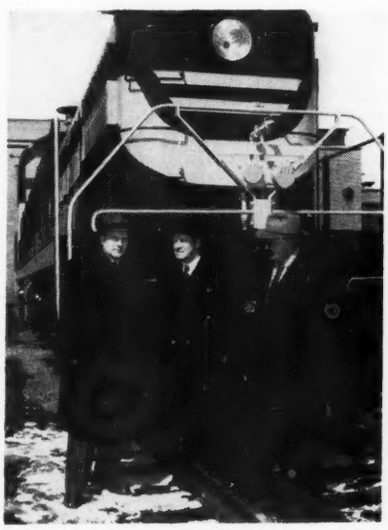
Ask Lower Rail Rates on Aluminum

L. E. Galaspie of the Reynolds Metals Company opposed the reductions unless they are accompanied by corresponding reductions in rates on competing aluminum articles. He said that the railroads now have before them a proposed adjustment of rates on aluminum, but the aluminum shippers have no assurance that it will become effective. When it comes to truck competition, Mr. Galaspie said it is more severe for aluminum traffic than for steel traffic, because the trucks are already handling relatively more of the aluminum tonnage.

In his rebuttal argument for the railroads, Mr. Kaier said that the aluminum proposal was submitted to the railroads "just four days ago." He assured the commission that it would receive fair consideration, because the railroads want the aluminum business, too. Meanwhile, Mr. Kaier suggested that, if the aluminum shippers have "all the truck competition they say, they are protected."

Mr. Kaier also addressed himself to Mr. Turney's argument, saying that the proposed truck-rate increase was "clearly a maneuver designed to defeat these railroad rates." He also had figures showing that the proposed rail rates for various hauls would be above competing truck rates.

"There is nothing to this proposition that we are going below truck rates," he continued. As to the "destructive-competition" argument, Mr. Kaier insisted that does not apply to the case, because the proposed rail rates would cover "fully distributed costs."



The first two Diesel-electric locomotive units of a $12,000,000 order for 58 units to Dieselize freight service on the Canadian Pacific's 517½-mi. Schreiber division (see *Railway Age* of November 26, 1949, page 60), were delivered recently at the plant of the Montreal Locomotive Works. N. R. Crump (left), vice-president of the C.P., is shown formally accepting the two 1,500-hp. road-switchers from Sir Frederick Carson (center), executive vice-president, Montreal Locomotive Works, as G. N. Curley, general manager, Eastern region, C.P., looks on. Still on order from the same manufacturer are two units of the same type as those delivered, as well as 40 1,500-hp. road-freight units

Senate Group Hears Of Subsidy to Trucks

Also gets R.B.A. statement asking fair deal for railroads

Increasing diversion of freight traffic to large, heavy trucks, which are "recipients of substantial subsidy," is "one of the principal factors contributing to the present unsatisfactory financial condition of the railroads," David I. Mackie, general counsel of the Delaware, Lackawana & Western, said this week in a statement to the Senate's subcommittee on domestic land and water transportation. The subcommittee also received from P. Harvey Middleton, president of the Railway Business Association, a statement advocating a five-point program of legislation "to assure the preparedness of the railways to meet fully the peacetime requirements of the American economy and defense demands in the event of war."

Mr. Mackie made his statement at the April 18 session of public hearings which the subcommittee is conducting in connection with studies it is making pursuant to Senate Resolution 50. It was part of the railroad industry's presentation, earlier statements on the general railroad situation and subsidy problem, and on subsidies to air transport, having been made by other railroad executives at previous sessions (see *Railway Age* of April 8, page 51, and April 15, page 63). The subcommittee, a unit of the Senate committee on interstate and foreign commerce, is headed by Senator Myers, Democrat of Pennsylvania. Chairman

Myers did not attend the April 18 hearing session; Senator Bricker, Republican of Ohio, was the only subcommittee member on hand.

General Counsel Mackie of the Lackawanna made it plain that the subsidized highway competition with which the railroads are "primarily" concerned is that of "the large and heavy intercity trucks—three-axle trucks and combinations (tractor-truck and semi-trailer, and truck and trailer)." These "competitive trucks," he called "highway freighters," and he had a booklet of pictures to show the subcommittee what a "highway freighter" is. Trucks operated by farmers, city cartage companies and merchants "are for the most part small trucks and largely non-competitive with the railroads," Mr. Mackie said.

He estimated that there are about 400,000 "highway freighters" in operation, a fleet which constitutes "but 5.2 per cent of all trucks and 0.9 per cent of all motor vehicles using our highway system." In this "small fraction of the users of public roads," he emphasized again, "there is centered the problem of diversion of freight traffic from the railroads to the highways." Mr. Mackie had figures indicating that, "while highway freighters traveled only 28.8 per cent of all truck-miles in 1948, they carried 72 percent of all highway freight ton-miles."

Other figures showed that highway ton-miles increased "an estimated 17 per cent" during the two-year period, 1947-49, when railroad freight ton-miles decreased 20 per cent. To support his conclusion that the "highway freighters have concentrated on diverting from the rails the 'cream' of the traffic," Mr. Mackie had figures showing that revenues of the regulated motor carriers in 1948 were 34.7 per cent of the total freight revenues of the railroads, although the ton-miles carried by them were only 6.6 per cent of railroad ton-miles.

"No Doubt About Subsidies"

Coming to his consideration of the subsidy situation, Mr. Mackie quoted from reports on recent studies in various states which "leave no doubt that the heavy motor vehicles are paying far less than their share of highway costs and are thus recipients of substantial subsidy from the states, either at the expense of other motor vehicle operators or at the expense of both other operators and the general taxpayers." Pointing out that the tax chiefly relied upon by the states in paying for the use of public roads is the gasoline tax, Mr. Mackie asserted that this tax does not result in payment by large and heavy trucks of their fair share of highway costs.

He also noted that the federal government has invested "nearly six billion dollars, or almost 20 per cent of the total investment," in public roads, streets and highways. "Yet," he added, "highway freighters are paying no user taxes to the federal government for the use of highways constructed with federal-aid funds."

The "highway freighters" were also singled out by Mr. Mackie as the vehicles which "are doing the serious and widespread damage to the highways." From authoritative sources, he quoted findings in support of the proposition that "billions of dollars' worth of the nation's finest highways are being pounded to pieces by overweight and overloaded commercial vehicles."

Illegal Loads Aggravate Damage

The practice of illegally exceeding weight limitations greatly aggravates this damage, Mr. Mackie added. And he went on to cite instances in which one trucker had been arrested in one state 81 times in a year for illegal overloading, two other truckers had been convicted 40 times, and another, 38 times. He also told of another trucking firm which had been "cited over 470 times for overloading, falsifying records and lack of proper license tags."

"The practice of overloading has become so prevalent mainly because of the profit motive," Mr. Mackie explained. "Overloading pays big dividends which are more than sufficient to pay the relatively small fines imposed if the trucker is apprehended, which he usually is not."

The Lackawanna general counsel also contended that large trucks are not suited to joint use of public highways with small vehicles and are serious traffic hazards. He called attention to I.C.C. figures for 1946, which showed that "80 per cent of the persons killed in accidents in which motor carriers of freight were directly involved were occupants of other vehicles and pedestrians."

Policies fostering the development of the "highway freighter," Mr. Mackie also said, have permitted "a fundamental function of the railroads, the transportation of heavy freight," to be shifted to the public highways—"greatly to the detriment of the private automobile owner and the public treasury." He asserted that many of the "expensive" highway improvements now being recommended are projects designed to meet the requirements of "highway freighters," while "excellent and wholly adequate highway facilities could be provided for the other 99 per cent of highway users at far less cost."

Trucks Should Fit Roads

"Government," Mr. Mackie added, "is under no obligation to furnish highway facilities which are not needed by the general public but are designed primarily to accommodate large and heavy trucks engaged in commercial transportation. Trucks should be accommodated to roads designed and built for the use of the general public, and not roads accommodated to the necessities of large and heavy trucks."

In closing, Mr. Mackie set out several conclusions which included expressions of the railroad industry's beliefs that Congress should impose a highway-user tax in connection with appropriations for federal-aid highways; that the states "should eliminate subsidies, on the state level, to large and heavy trucks and should protect the highways from abuse and destruction by reasonable weight and size limitations and strict enforcement thereof"; that federal legislation should be enacted to require "all motor carriers of freight engaged in interstate commerce at all times to carry on each vehicle a manifest of its lading and the weight of its cargo"; and that the federal-aid highway act should be amended to permit the use of federal-aid funds "for the purpose of providing and installing weighing stations, platform scales, electronic and portable weighing equipment."

R.B.A. Five-Point Program

The five-point program advocated in the statement filed with the subcommittee by President Middleton of the Railway Business Association called for the establishment of conditions under which the railroads could earn a "fair return"; equal opportunity for all for-hire interstate carriers to use transport facilities provided by public funds; coordination by permitting any agency of transport to offer multiple-type service; adherence to the present "voluntary" policy with respect to railroad consolidations; and concentration of federal regulation of all transport agencies in a single regulatory commission.

As Mr. Middleton summarized R.B.A.'s position, it is one holding that the "outstanding need" is a "new national transportation policy assuring equality of treatment of all forms of transport." He referred to what he called the "general agreement" that there are "serious inequities" in the present situation, and to the "recognition" that delay in removal of such inequities "not only has an adverse effect on our peacetime economy, but may endanger our national security."

Referring also to current studies of "possible demands on transportation facilities in the event of another war," Mr. Middleton's statement went on to indicate R.B.A.'s view that this, too, points up the need for a new transportation policy—despite the fact that the railroads "are in better physical condition today to serve the nation than in any previous period." Such readiness, Mr. Middleton explained, is due primarily to expenditures, "exceeding $30 billions," which the carriers made between 1921 and 1949 for improvements and maintenance of fixed facilities.

"Crux of the Problem"

He went on to say that the "crux of the transport problem lies in the unsatisfactory financial condition of the railways," pointing out that the railroad industry's ability to continue indefinitely to perform its national defense role depends upon its ability to earn a "fair return." A "fair return," in R.B.A.'s opinion, would be earnings equivalent to an annual average of 6 per cent on property investment, without benefit of sub-

sidy or gift. Such an earnings basis is necessary "to insure uninterrupted solvency," Mr. Middleton insisted, emphasizing that only a part of the railroad industry's net income is available for dividends.

"Generally speaking," he explained, "actual expenditures, such as the improvement of bridges, buildings, stations, improved signal equipment, reduction of grades of curves, substitution of heavy rail for light rail, and countless other improvements, must come from earnings. If the money is not earned, the improvements are not made. In considering this question of a fair return, due weight should be given to the services which the railways must always be prepared to render, in peace or war, as a substitute for water, highway, and air carriers, whose operations are seasonably suspended, or interrupted by adverse weather conditions."

Charges and Coordination

In recommending that all for-hire, interstate carriers be accorded equal opportunity to use transport facilities provided by the federal government, the R.B.A. went on to call for the imposition of "adequate" charges for the use of such facilities. On the matter of transport coordination Mr. Middleton referred to a study of the matter which R.B.A. made in 1946. As a result of that study, he said, the Association took a position (to which it still adheres) in favor of eliminating all statutory provisions or administrative interpretations which restrict voluntary cooperation between the different types of interstate transport. It also remains in favor of eliminating "unnecessary, uneconomical, and duplicating transportation" by closer coordination of services. As Mr. Middleton put it, "transport coordination should be extended further by a regulatory policy which will assure competitive equality between the various forms of commercial carriers."

Elaborating upon his voluntary-consolidations recommendation, Mr. Middleton explained that it was intended to apply not only to consolidations of railroads, but also to consolidations of and coordination between carriers of different types. Also, R.B.A. believes that, in passing on railroad consolidation proposals, the I.C.C. "should be governed by broad considerations of public interest, with due regard to the competitive principle, and with proper recognition of the economic fallacy of maintaining lines that may well be discontinued."

The Association's principal argument, in support of its recommendation calling for a single federal regulatory agency, was that separate agencies "inevitably develop policies and practices designed to promote and facilitate the operations of the particular type of carrier under their jurisdiction." This, Mr. Middleton added, "not only results in differences of interpretation of policies which cause confusion, but also makes difficult a coordinated national transportation system able to respond quickly in a national emergency."

R. H. Smith, president of the N. & W., addresses the company's 25th annual Better Service Conference at Roanoke, Va. Seated at the right is L. C. Yates, general claim agent of the railroad, who was general chairman of the conference

N. & W. Holds 25th Better Service Meeting

Hears that 20% traffic loss could bankrupt 4/5 of roads

All profit of the railroad industry would vanish if traffic dropped 15 per cent, while a 20 per cent decline "would put four-fifths of American railroads into bankruptcy," Dr. Douglas Southall Freeman warned in an April 14 address at Roanoke, Va. The former editor of the Richmond News-Leader and noted historian, who is also a director of the Southern, spoke at the Norfolk & Western's Better Service Conference.

The conference, held April 14 and 15 at the Hotel Roanoke, was attended by approximately 600 delegates and guests. It was the 25th annual meeting of delegates representing local Better Service Clubs throughout the N.&W. system. The general chairman was I. C. Yates, general claim agent of the road.

Dr. Freeman spoke at the April 14 luncheon session, where he was introduced by President R. H. Smith of the N.&W. J. P. Jackson, general superintendent of the road's Western General division, acted as toastmaster. The speaker at the dinner session on the same day was Donald R. Richberg, attorney and former counsel for the Railway Labor Executives' Association. The dinner-session toastmaster was C. L. Blair, general superintendent of the N.&W.'s Eastern General division, while Mr. Richberg was introduced by the road's general counsel, F. M. Rivinus. At other sessions, the delegates were addressed by N. & W. executives, including President Smith; W. J. Jenks, chairman of the board; George Dunglinson, Jr., executive vice-president; and S. F. Small, vice-president—assistant to president.

Dr. Freeman's warning of what traffic declines of 15 or 20 per cent might do to railroad earnings came after he had pointed out that the present rate of return is only about 2.9 per cent. And he suggested that a 20 per cent drop in traffic is "not unlikely," because business is now "at a very high level." He did not think that the American people would "consciously" permit the railroads to become bankrupt, but he said the people might "unconsciously" allow such a situation to develop because of their "misconception" of the recuperative powers of American industry.

Americans assume that the American business man "always lands on his feet," but "he doesn't," Dr. Freeman added. He also assailed current economic policies of the government, telling the N.&W. employees that the movement based on such policies is "a war against your children." Under such policies, he warned, "we are eating up the patrimony of America."

Previously, Dr. Freeman considered whether the railroads had done what America expects of those who develop public utilities. He found that the carriers have met every test in that regard, i.e., they are privately financed and without subsidy, they are operated economically, efficiently, and safely, and they contribute much to the national economy in the way of giving employment at high wages and paying taxes.

"There is in America today no greater industrial marvel than the fact that the Norfolk & Western hauls a ton of freight a mile for something less than a cent," Dr. Freeman also said. And he can "never understand," as he put it, "why the railroads continue to hide their light under a bushel."

Meanwhile, Dr. Freeman was not able to give such a favorable report on the taxpayers' treatment of the railroads. On that score, he spoke of the "billion dollars a year" which the government is spending on "basic transportation facilities" to compete with the unsubsidized railroads. As to the "infant-industry"

argument in support of subsidies to air transportation, Dr. Freeman said: "A dog-gone lusty infant—it's going to eat papa up."

Mr. Richberg's address was a statement in exposition and support of his view that this country "can make social progress without socialism." He contended that "everything the government seeks to do by compulsion could be done by private agreement, with the government limiting itself to seeing that contracts are observed and monopolies curbed." As an example of the set-up he had in mind, Mr. Richberg cited the Railway Labor Act of which he was one of the authors.

He conceded that there have been "failures" under the act, but insisted that no other labor legislation has worked as well. Despite every criticism of the act, Mr. Richberg said, impartial students of it would reach these conclusions: Under it, management and labor have fared better, and the public service has been bettered; and it has demonstrated that disputes can be settled by agreements. In the latter connection, Mr. Richberg found it "regrettable" that "in recent years, the virtues of the act have been obscured" by its failure to bring about settlement of some controversies. "What has been done for 20 years," he added, "could be done for 20 more. If there's a will for peace, here is a way."

Delivering his address at the conference's opening session, N.&W. President Smith first told his fellow workers of the coal strike's adverse effect on their railroad's 1949 earnings. The main reason for this, he said, was the "complete domination of the coal industry by one organization"; and he expressed hope that this "senseless situation" would soon be corrected and "private enterprise returned to that industry."

"Old Fashioned Good Manners"

The N.&W. president also explained the more important projects carried out by the road during 1949 for improvement of its facilities. He put the total cost of such improvements at $30 million. That demonstrated how the management is carrying out its policy of providing employees with the best possible tools, Mr. Smith added. He went on to say, however, that only the employees can keep the road's customers satisfied.

Thus he called upon the delegates to emphasize to their fellow-workers the necessity for good public relations, which he called "old fashioned good manners." He also stressed the need for reducing freight loss and damage claims and maintaining a good employee safety record.

Mr. Smith also referred briefly to the competition of subsidized transportation agencies; and he gave figures comparing increases in railroad costs with increases in rates and fares. The figures, he suggested, should convince "any reasonable person" that the railroads "have made a real effort to avoid pricing themselves out of the market." As to the subsidy situation, Mr. Smith said the employees should become "thoroughly acquainted" with the facts about it—"so that the knowledge may guide your actions as citizens and taxpayers."

Taxes Up 7.2 Times

Vice-President Dunglinson's address was a highlight review of significant changes and developments during the past 50 years in the transportation field and on the N.&W. Among other things, he noted that taxes paid by the road in 1948 were the equivalent of 18 cents per $1 of gross revenue; the comparable figure for 1900 was 2½ cents. Mr. Dunglinson also told the delegates that "full realization" of the N.&W.'s future possibilities "depends on cooperative teamwork of our whole organization."

Vice-President Small indicated how railroad employees can help eliminate subsidized competition by making personal appeals, as individual voters and taxpayers, to their elected representatives. A personal presentation, he explained, "is much more effective than petitions, resolutions, etc." Mr. Small also expressed his view that "the public is beginning to recognize the abuse of its highways by large trucks."

Chairman Jenks' talk was a greeting to the delegates and comment in praise of their work at the conference.

Other proceedings included adoption of reports presented by the conference's committees on the following subjects: Safety—Always; Sales and Service; Subsidized Competition; Stop Rough Handling of Cars; More Care for Less-Carload Shipments; The Challenge of Citizenship.

Senate Confirms Appointment Of Knudson to the I.C.C.

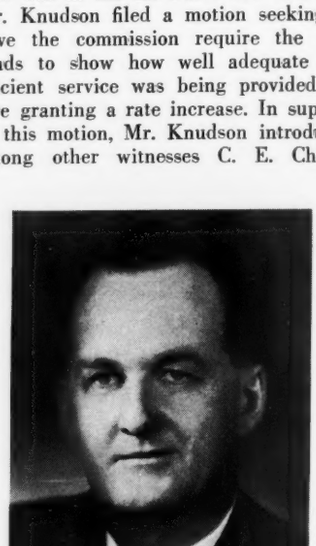
The Senate on April 13 confirmed President Truman's appointment of James K. Knudson for membership on the Interstate Commerce Commission. Mr. Knudson, who has been an attorney on the staff of the Department of Agriculture, was scheduled to take his oath as commissioner the latter part of this week. He succeeds the late Carroll Miller for the remainder of a term expiring December 31, 1953.

Active in Rate Cases

Mr. Knudson was born on January 6, 1906, at Brigham City, Utah. He was educated at the University of Utah and at George Washington University, Washington, D.C., receiving his law degree from the latter school in 1934. He later attended Harvard Law School, and in 1938 received his L.L.L. degree there

In the field of transportation law, Mr. Knudson has frequently represented the Department of Agriculture before the I.C.C. during the past 10 years. He joined the department in 1935 as senior attorney in the office of the solicitor, and subsequently served as division chief in the same office and as commerce counsel to the secretary. The latter position he has occupied since 1941, and in this connection has represented the secretary before the I.C.C., the U.S. Maritime Commission, Civil Aeronautics Board, and various state commissions. He was active in all general freight-rate cases of recent years, beginning with Ex Parte 148, and the Wool Rate case, the Mechling Barge case, the Harwood case, and a number of motor carrier cases.

It was in the Ex Parte 168 case that Mr. Knudson filed a motion seeking to have the commission require the railroads to show how well adequate and efficient service was being provided before granting a rate increase. In support of this motion, Mr. Knudson introduced among other witnesses C. E. Childe,



Harris & Ewing

James K. Knudson

former member of the defunct Board of Investigation and Research and a transportation consultant of the agriculture department, and with Mr. Childe undertook to make the point that the commission should tell the railroads to improve their financial situation by cutting costs rather than by raising rates.

Following his graduation from high school in 1924, and prior to entering the University of Utah in 1927, Mr. Knudson served for three years abroad doing missionary work for the Mormon Church. Concurrently, he was serving in an editorial capacity with the "Millennial Star" and later, before coming to Washington, D.C., in 1930, he was connected with other Utah newspapers. In 1930 he worked for a time as reporter for the "U.S. Daily" in Washington, and from 1931-33 he was a division chief with the U.S. George Washington Bicentennial Commission. He wrote a historical pageant, "The Great American," in 1933, and has written historical essays as well as other pageants and plays. He is the author of two books, "Laws Applicable, U.S.D.A.," and "Murder By The Clock," the latter being a study of relation of the element of intention to the act of murder. Mr. Knudson has also been a teacher and lecturer at Columbus University (Washington, D.C.), and at the department of agriculture graduate school. He is a member of the Harvard Club, and former president of the Utah State Society, Washington, D.C.

Mr. Knudson's views as to the commission's proper role in the regulatory field were indicated recently by answers he made to a series of questions submitted to him by Senator Magnuson, Democrat of Washington, who is a member of the Senate committee on interstate and foreign commerce. While the questions reflected the senator's interest in rehabilitation of the coastwise and intercoastal water-carrier industry. Mr. Knudson gave many of his answers a broader base.

Asked to state his "theory as to desirable rate making in the field of domestic transportation," he replied that he had "no theories or predelictions concerning this matter." He believes, as he put it, that the commission and its staff "should be governed by the rate-making principles set forth . . . in the several parts of the Interstate Commerce Act, and particularly by the National Transportation Policy and section 15A of Part I, and similar sections in other parts of the act."

Believes in Regulation

To another question which asked if he believed "that the free play of economic forces alone should govern in the transportation field," Mr. Knudson gave a negative answer. In making that reply, he explained that he had interpreted the question as one "suggesting the desirability of no regulation at all." And again he referred Senator Magnuson to the National Transportation Policy.

Replying to other questions, he went on to tell the senator that he does not believe the lowest-cost transportation is always the cheapest in the long run. "Unless competition is preserved in a balanced form," Mr. Knudson added, "there is always the possibility that the cheapest form will overcome other forms and be left as a monopoly in the field." Neither does he believe that "non-compensatory" rates should be "tolerated." They "are not lawful under the Interstate Commerce Act," he pointed out, and then added: "But the zone of reasonableness in rate making is flexible, and depends to a large extent on the judgment of regulatory agencies. Such agencies should be governed in the exercise of that judgment by the intention of the framers of the act to prevent 'destructive competitive practices.'"

Assures Sen. Magnuson

Mr. Knudson next assured Senator Magnuson that he was acquainted with the "highly essential role played in the war by the seagoing vessels of the coastwise and intercoastal fleets." At the same time, the appointee to the commission thought it "only fair to add that I am also cognizant of the vital role played by motor carriers, pipe lines, freight forwarders, and railroads in the war effort." As to what he or the commission proposes to do to restore the coastwise and intercoastal services, Mr. Knudson said he could not foretell. "I can only pledge," he added, "that my actions vis-a-vis water carriers will be governed by the context and intent of the laws, by the factual records that are made by the parties, and with a view to protecting the public interest in the premises."

Another of Senator Magnuson's questions asked if Mr. Knudson believed the commission "should take the initiative in attempting to solve the problems and difficulties of water carriers. . ." Mr. Knudson replied that he was "not adverse" to the commission's taking action on its own initiative "whenever circumstances warrant." He went on to suggest, however, that the commission's "affirmative duty to maintain and preserve a national transportation system" should not encompass the "proper functions of the private managers of the nation's transportation properties."

TRAVELS 31,000 MILES IN SEVEN WEEKS—Canadian National officers at Winnipeg inspecting "Big Bertha," the green and gold streamlined Diesel-electric locomotive which has been hauling the "Transcontinental Limited" between Montreal and Manitoba's capital for the past seven weeks. Bucking blizzards and temperatures down to 50 below, the 4,000-hp. demonstration Diesel, on loan from Montreal Locomotive Works, has piled up more than 31,000 miles without once being late for any cause due to the locomotive

Railroads Rap Adjustment Board Interpretations

The presidential fact-finding board which is hearing demands of the railroads' 150,000 conductors and trainmen for a 40-hr. week for yard men and other important rule changes was urged to strike the "handcuffs" from railroad efficiency by approving the carriers' counter proposals which would do away with restrictive working rules.

G. P. Brock, vice-president of the Gulf, Mobile & Ohio, told the board that artificial distinctions between road and yard work resulting from interpretations of the working rules by the National Railroad Adjustment Board not only cause serious train delays, but also give rise to extravagant penalty claims. "Claims of employees have been sustained," he told the board, which "required payment for a full extra day to men who performed only a few minutes work, or even no work at all. These handcuffs on railroad efficiency," Mr. Brock said, "should be removed by clarifying the original intent of working rules now in effect." He cited an award which required the G.M.& O. to pay more than half a million dollars in 1942 to certain road and yard service employees in settlement of claims for work for which they had already been paid, or did not perform at all. Payments to some employees amounted to as much as $16,300, he testified. The claims were based on work done by road crews at a small station in Missouri where, in 1932, yard engine service was discontinued because business had dwindled to the point where there was less than half a day's actual switching to be done.

E. B. Perry, assistant vice-president, New York, New Haven & Hartford, urged the board to approve the carriers' proposed changes in the starting time rule so that interpretations contrary to the intent of the present rule can be avoided. He said the existing rule often requires the railroads to put yard crews on at arbitrary times many hours before there is any work for them to perform, without regard to local traffic conditions. He questioned adjustment board decisions which have narrowed the time-spread to 90 min. within which extra yard crews may be started, despite the irregular flow of business and the need for meeting unexpected switching demands. "Waste and inefficiency have resulted from the existing rules as interpreted by the adjustment board," Mr. Perry said, and "the railroads are now forced to use a larger number of yard crews than are

actually needed. Past experience has shown that no substantial relief from the yard starting time rule can be obtained through negotiation on the respective railroads with the unions," he testified, and "the relief must be obtained through definite recommendations of the emergency board and applied on a national basis."

Daniel P. Loomis, chairman, Association of Western Railways, pointed out that the railway labor organizations had asked to be exempted from the Fair Labor Standards Act which established a 40-hr. week in other industries in 1938. "The conductors and trainmen have preferred wage increases and other rules changes to a 40-hr. week," Mr. Loomis said, "and after having succeeded in getting all the war and postwar increases that workers in outside industry obtained, and other increases through rules changes as well, they now are endeavoring to pyramid those wage increases and rule changes by raising present rates of pay by 20 per cent," earning 48 hours' pay for 40 hours' work.

Advisory Boards Credited for Aid Toward Rail Improvements

Improvements costing over $7 billion have been installed during the past 10 years by America's railroads, and a share of credit for their installation must go to the constructive "plain talk" given the roads by the shippers advisory boards. Robert S. Henry, vice-president of the Association of American Railroads, speaking before a joint luncheon of the Traffic Club of Chicago and the Midwest Shippers Advisory Board, on April 13, said that 10,000 units of Diesel power, 1,700 new and improved steam locomotives, 570,000 new freight cars and 13,000,000 tons of new rail, together with extended installation of centralized traffic control and other improvements, have enabled a 50 per cent increase in the hourly output of freight trains during the same 10-year period. Despite these improvements to performance, he said "financial results of railroad operations since the close of the war have been less than satisfactory — and the answer to the problem is to be found in the relative levels of wages, prices and taxes as contrasted with rates and fares.

"The average of railroad wage rates and of the prices of materials and supplies which the railroads buy, is more than double what it was 10 years ago. The average revenue received for moving a ton of freight one mile is only slightly more than it was at the end of 1920, and is less than 50 per cent higher than it was before the recent war. Taxes are the next largest item of cost, and taxes are taking more than twice as much of each dollar of revenue." The result of these factors has been a "less-than-satisfactory earning capacity" by virtually the entire railroad industry.

Listing two major threats to continued rail progress, Mr. Henry said that a serious decline in traffic volume, preventing full utilization of facilities, would bring a rise in transportation costs, and a decline of earnings would "discourage or prevent continued investment in better railroad plant and facilities."

"As to volume of traffic," he said, "there is the shift from railroads to other forms of transportation which has been evident since the war. To the extent that this is due to service advantages in particular cases, or to a genuine decrease in the cost of transportation, there can be neither complaint or objection. But much of the erosion of rail traffic is due to the fact that a large, and in some instances, major part of the cost of other forms of transport is covered in the general tax bill of all of us."

William E. Callahan, of the Car Service Division of the A.A.R., told the board that "demands for box cars to move grain will constitute a real problem this year," when the carriers will face the problem of again moving a considerable amount of old grain out of storage simultaneously with the marketing of new crops.

A. H. Schwietert, chairman of the national management committee on "perfect shipping," told the group that last year's loss and damage bill — over $110,000,000 — represented more than 25 per cent of the railroad industry's net income, and that if saved, the sum would have purchased 23,000 box cars.

At the meeting, the board passed a resolution calling on the A.A.R. to inaugurate and expand an overall program to deal with freight claim prevention. It also passed a resolution opposing placement of all of the functions of the Interstate Commerce Commission and the Maritime Commission under the executive branch of the government.

Clement Heads Bond Sales Group

Martin W. Clement, chairman of the board of the Pennsylvania, has accepted the chairmanship of the Treasury Department's industrial advisory committee on savings bonds. The committee, composed of leading industrialists, acts as counsel to the department in promoting sale to industry of U. S. savings bonds.

Clerks Union Wins Pullman Election

The Brotherhood of Railway Clerks has been certified by the National Mediation Board as the collective-bargaining representative of clerical, office, station and storehouse employees of the Pullman Company. The certification came as a result of a recent election in which the brotherhood polled 1,646 votes, while the Pullman Clerks' Association and the Brotherhood of Sleeping Car Porters polled 809 and 362, respectively.

The association formerly represented the clerical and "miscellaneous" employees involved, while the porters' brotherhood represented storeroom and non-clerical employees. All these employees voted as a group in the election, N.M.B. having determined that they constituted one class or craft. "Labor," organ of the railroad unions, hailed the board's certification as the "final act," which "cleared the way for planting the brotherhood's flag on the last major carrier outside the Clerks' fold." It referred to the defeated association as "the only large surviving 'company union' in the railroad industry."

Edwards Succeeds Douglass On National Mediation Board

Leverett Edwards, who has served in several railway labor cases as referee and as a member of emergency and arbitration boards, has been appointed by President Truman to membership on the National Mediation Board. Mr. Edwards, whose appointment was confirmed by the Senate on April 17, is an attorney of Oklahoma City, Okla.

On N.M.B. he will succeed Frank P. Douglass for the remainder of a term expiring February 1, 1952. Judge Douglass, also an Oklahoman, resigned on March 1 to become a candidate for the Democratic nomination for governor of that state. Senate confirmation of Mr. Edwards came with unusual speed. The President submitted the nomination to the Senate on April 13, when it was referred to the committee on labor and public welfare. On the following day, that committee reported the nomination favorably to the Senate, and it was confirmed at the next session.

Mr. Edwards was born in 1902 and received his LL.B. degree from the University of Oklahoma in 1946. As noted above, he has been practicing law in Oklahoma City, meanwhile serving in recent years on various assignments in cases arising under the Railway Labor Act. His service as referee was on grievance cases which had become deadlocked before the National Railroad Adjustment Board. His service on emergency boards included membership last year on a board which investigated the dispute arising out of demands of the Brotherhood of Railroad Trainmen for inclusion, in its working agreements with the Southern Pacific, of "full-crew" provisions like those formerly included in a California

Leverett Edwards

"full-crew" law that was repealed in 1948.

That board's report criticized some of the union's demands because they would result in "considerable feather-bedding," and it also condemned train-limit legislation. "Whatever may have been the merit of train-limit laws passed by the various states at the time, they can no longer be justified," it said. (See *Railway Age* of September 10, 1949, page 74.)

Freight Car Loadings

Loadings of revenue freight in the week ended April 15 totaled 707,272 cars, the Association of American Railroads announced on April 20. This was an increase of 7,143 cars, or 1 per cent, above the previous week, a decrease of 58,671 cars, or 7.7 per cent, below the corresponding week last year, and a drop of 77,339 cars, or 9.9 per cent, under the equivalent 1948 week.

Loadings of revenue freight for the week ended April 8 totaled 700,129 cars, and the summary for that week as compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS

For the week ended Saturday, April 8

District	1950	1949	1948
Eastern	130,180	138,939	136,083
Allegheny	148,321	162,917	137,128
Pocahontas	63,349	63,097	21,942
Southern	125,783	121,020	117,333
Northwestern	68,501	111,662	103,798
Central Western	108,051	106,701	103,861
Southwestern	55,944	53,448	62,789
Total Western Districts	232,496	271,811	270,448
Total All Roads	700 129	757,784	682,934
Commodities:			
Grain and grain products	39,056	42,130	37,181
Livestock	7,759	8,568	10,481
Coal	157,571	157,536	53,129
Coke	13,333	14,932	9,526
Forest products	37,243	35,836	42,501
Ore	13,559	60,932	40,324
Merchandise l.c.l.	86,832	96,404	113,244
Miscellaneous	344,776	341,446	376,548
April 8	700,129	757,784	682,934
April 1	720,353	725,623	660,631
March 25	717,233	596,329	663,663
March 18	725,570	607,922	699,593
March 11	707,962	709,326	796,486
Cumulative total 14 weeks	8,827,244	9,714,095	10,508,546

In Canada.—Carloadings for the week ended April 8 totaled 63,594 cars, compared with 72,810 cars for the previous week, and 71,997 cars for the corresponding week last year, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
April 8, 1950	63,594	33,508
April 9, 1949	71,997	32,528
Cumulative totals for Canada:		
April 8, 1950	958,146	418,678
April 9, 1949	1,016,193	447,525

Canadian Unions Reject Conciliation Board Reports

Compromise proposals of two conciliation boards, aimed at settlement of a wage-hour dispute between Canadian railroads and their employees, and announced at Ottawa, Ont., on April 15, have been rejected by labor spokesmen, one of whom predicted that a strike vote would be taken. The railways withheld comment pending study of the findings, which were estimated to involve added costs of approximately $19 million per year, as against an estimated annual cost of $84 million for full compliance with all union demands.

Two major groups of unions representing Canadian railroad employees are demanding a 40-hr. week with the same weekly pay as employees now receive for a 48-hr. week. In addition, the Canadian Brotherhood of Railway Employees and the Canadian Congress of Labor, representing about 34,000 employees, are seeking a wage increase of 10 cents per hour and institution of the check-off system, under which the companies would collect union dues. It was A. R. Mosher, of Ottawa, head negotiator for this group, who threatened a strike vote.

A group of 15 international unions, representing some 90,000 employees, is asking for a pay increase of seven cents per hour.

The recommendations of the two boards—identical for both groups of unions and not binding on either party—would provide for a 44-hr. week, with hourly pay increased by about 6.8 cents. This would not quite maintain present 48-hr.-week take-home pay; adoption of the recommendations would mean that the employees would gain four hours per week, but lose about one hour's pay. Earnings, however, might be boosted through overtime pay after 44 hr. for those employees who continue to work on a 48-hr. basis; while some 20,000 shop employees, already on a 44-hr. week, would gain higher weekly pay. The check-off proposal was rejected.

Parr Quits I. C. C. Staff To Join Water Carrier

Gilbert J. Parr, chief of the Cost Finding Section of the Interstate Commerce Commission's Bureau of Accounts and Cost Finding, will leave the commission's service as of May 1, 1950, to accept employment in an official capacity with the Waterman Steamship Corporation of Mobile, Ala.

Mr. Parr entered the service of the commission July 16, 1939, at which time he assisted in the organization of the Cost Finding Section. Previously, he was employed by the Missouri Pacific for a period of 19 years in various accounting-department positions.

Burgess Heads Defense Group, Succeeding Faricy

E. H. Burgess, vice-president and general counsel of the Baltimore & Ohio, has been appointed by Secretary of Defense Louis Johnson to the chairmanship of the Civilian Components Policy Board of the National Military Establishment. Mr. Burgess succeeds William T. Faricy, president of the Association of American Railroads, who had served since last August when the board was organized.

The function of the board is to coordinate all policy and programs relating to civilian components of the Armed Forces, i.e., the organized reserves of the various services and the National Guard (see *Railway Age* of August 6, 1949, page 62). Mr. Faricy has agreed to remain with the board in an advisory capacity for several months.

March Operating Revenues Above Previous Year

From preliminary reports of 82 Class I railroads representing 81.1 per cent of total operating revenues, the Association of American Railroads has estimated that the March gross amounted to $605,251,114, an increase of 1 per cent above the $599,245,718, reported for the same 1949 month. Estimated March freight revenue was $514,595,122, as compared with March, 1949's $499,163,973, an increase of 3.1 per cent. Estimated passenger revenue was $48,398,464, as compared with $54,845,900, a decrease of 11.8 per cent. All other revenue was down 6.6 per cent—$42,257,528, as compared with $45,235,845.

Smith Decries "Habit" of Seeking Federal Aid

"Federal aid has been most aptly described as the art of making what the government takes from you in the form of taxes appear like a gift when a part of it is given back to you," R. H. Smith, president of the Norfolk & Western, told the Atlantic States Shippers Advisory Board at Roanoke, Va., on April 13.

After reviewing the history of the N. & W., as "an excellent example of vindication of faith in private enterprise and individual effort, which this nation so desperately needs now," Mr. Smith told his audience that "today we have a national habit of seeking help from that magic source, the federal government, when we get into difficulties—generally without any real thought as to where the cost of that help actually comes from, but with a hope that is is at the expense of the other fellow . . . The bad part of that habit is that federal aid is money which we, ourselves, must inevitably repay with very great additions for interest and overhead. It is almost invariably spent lavishly and seldom with the sound, hard headed, common sense economy that we insist on in connection with the expenditure of funds which we must directly furnish ourselves."

As "outstanding examples" of recipients of federal aid, he mentioned the air lines, which he called "a magnificent development," but one that "isn't yet willing to stand on its own financial feet"; and the parcel post service, which he described as "substantially responsible" for the steadily increasing deficit of the Post Office Department.

"While the commercial air lines say," he continued, "that they are able to handle passengers at rates equal to, and sometimes even below, the rates of com-

Five Southern Pacific representatives, visiting SKF Industries, Inc., Philadelphia, Pa., see assembly-line production of roller bearing journal boxes of the type which will be installed on five new Los Angeles-New Orleans "Sunset Limiteds." Checking blueprint of a journal box are, left to right, N. A. Passur, superintendent car construction, San Francisco, Cal.; D. M. Poor, general foreman, Los Angeles, Cal.; D. A. Singleton, district master car repairman, Houston, Tex.; E. E. Packard, also district master car repairman, Los Angeles; and J. S. Netherwood, superintendent motive power of the S.P.'s lines in Texas, Houston. Delivery of all-stainless steel cars by the Budd Company has been started. Each train will have 15 cars — six sleepers, four chair cars, lounge car with coffee shop, full lounge car, dining car, baggage car and dormitory car

peting self-sustaining transportation agencies, they insist that they must still have their air fields and other facilities built for them by the taxpayers. Further, they declare that they must receive air mail pay which, for the last year the record is available, averaged more than 27 times as much per piece of first-class mail handled as the government paid to the self-sustaining railroads for the same service. The air lines apparenty have the firmly fixed habit of depending upon government subsidy."

Clem D. Johnson, president of the Roanoke Public Warehouse, was toastmaster at the luncheon meeting.

Concern About A.A.R. Car Order

Other discussions at the meeting pointed up principally shippers' concern about further tightening of the eastern box-car supply which they expect to result from the recent Car Service Division order requiring empty return of western-owned box cars. There was also talk about the bad-order situation. The C.S.D. order is Special Car Order No. 56, which became effective April 12. Its provisions prohibiting all return loading of the involved western cars made it much more drastic than its predecessor, Special Car Order No. 55, which had been in effect from March 23 and which permitted some westbound loading.

C. R. Megee, vice-chairman of C.S.D., explained that Order No. 56 was issued "most reluctantly" after Order No. 55 had failed to bring about needed relocation of cars to the west. Homer C. King, director of the Interstate Commerce Commission's Bureau of Service, implied that the I.C.C. was watching the situation, and would issue a service order if the C.S.D. order does not get the western cars home. "These cars have got to go west," Mr. King said, adding that eastern-owned gondolas, which are now in the west, "ought to come back."

As to the latter, Mr. Megee said that C.S.D. had recently advised western roads that gondolas owned by eastern lines must be handled in accordance with Car Service Rules if "more drastic regulations" are to be avoided. As to the shortage of gondolas, Mr. Megee suggested that substitution of hoppers for what would normally be gondola loadings could bring much relief. G. C. Randall, the C.S.D.'s district manager at New York, had previously said that the hopper supply will be "easy," because the coal industry "will probably produce all it can market in about three days a week."

Speaking of the bad-order situation, Mr. Megee explained that the backlog of bad-order cars increased during the period of the coal strike because the reduction in traffic forced railroads to curtail shop work. There has, he said, been a material increase in such work since the end of the strike; and he predicted that the April 1 figures would show that the number of bad-order cars had been substantially reduced during March. Mr. King's comment was that "any road which is not working a full complement in its shops on the bad-order backlog is not doing its duty by shippers." It was stated this week at C.S.D.'s Washington, D. C., headquarters that the backlog was reduced by 11,000 cars in March.

A. L. Hammell, president of the Railway Express Agency, said that express service has not been what the Agency would like it to be, but that the drive for improvement is being continued. Mr. Hammell also noted how "socialization" of transportation is "seriously affecting" the Agency. He referred to the competing parcel post service, calling the situation an "outstanding example of what happens when Uncle Sam opens up across the street and undersells you on every item."

Will Hold Hearings on Bills For Union Shop and Check-off

Senate and House committee have scheduled hearings next month on pending bills to amend the Railway Labor Act for the purpose of authorizing the inclusion in labor-management agreements of provisions for a "union shop" and "check-off" of union dues. On the Senate side, the hearings will open May 1 before a subcommittee of the committee on labor and public welfare, while the House hearings will be conducted by the committee on interstate and foreign commerce, beginning May 9.

The Senate bill is S.3295, which was introduced by Senator Murray, Democrat of Montana, for himself and seven other senators, including Senator Thomas, Democrat of Utah, who is chairman of the committee on labor and public welfare. Mr. Thomas also heads the subcommittee which will conduct the hearings, other members being Senators Neely of West Virginia and Lehman of New York, Democrats, and Morse of Oregon and Donnell of Missouri, Republicans. All of them, except Senator Donnell, are among the bill's sponsors. The House bill is H.R. 7789, sponsored by representative Crosser, Democrat of Ohio, who is chairman of the Committee on interstate and foreign commerce. (See *Railway Age* of March 25, page 68, and April, page 64.)

Senate and House Get Proposals To Reject I.C.C. Revamp Plan

Senator Johnson, Democrat of Colorado, and Representative Crosser, Democrat of Ohio, chairmen, respectively, of the Senate and House committees on interstate and foreign commerce, have introduced resolutions to disapprove President Truman's proposal to vest in himself the authority to designate the Interstate Commerce Commission's chairman while making that official responsible for the "internal administration" of the commission. The proposal was one of several plans for reorganizing federal agencies which the President submitted to Congress on March 13.

The submissions were pursuant to authority granted to the President in the Reorganization Act of 1949. The act provides that plans thus submitted shall become effective in 60 days unless the Senate or House passes a resolution dis-

approving them. The Johnson and Crosser resolutions are, respectively, Senate Resolution 253 and House Resolution 545. (See *Railway Age* of March 18, page 79.)

G.O.P. Chairman Sees RRs "Vexed" By Government

The chairman of the Republican National Committee—Guy G. Gabrielson—told the Western Railway Club at its dinner in Chicago on April 18 that "having management decisions depend on political action is a helluva way to run a railroad." While the speaker devoted most of his address to an exposition of his party's stand on private enterprise in general, he did take time out to make reference to the railroad's particular problems. He alluded to the more than $1 billion in taxes which the rail carriers pay, and referred to the fact that while the railroads are called upon "to pay your own way, you're expected to meet the competition of carriers which draw on federal subsidies for part of their revenue. On top of that you're faced with direct government competition through the federal barge lines."

After quoting from a statement by John Hickey, president of the Western Railway Club in 1889-1890, complaining about legislative enactment of rates, the speaker declared: "If I were to bring Mr. Hickey's statement up to date, he'd have to mention more than rate-making to include all the various governmental regulations which are vexing the railroad industry."

I. C. C. Members Air Differences on M. P. Plan

Appearing before the Senate committee on interstate and foreign commerce last week, members of the Interstate Commerce Commission divided sharply in their views on the commission's plan of reorganization for the Missouri Pacific. Commissioner Mahaffie supported the plan, which was approved by a majority of the I.C.C. last August, while Commissioner Alldredge, a dissenter at the time the plan was approved, again stated he thought the plan was "overly conservative."

The Senate committee, headed by Senator Johnson, Democrat of Colorado, was investigating the I.C.C.-approved reorganization plan under the provisions of Senate Resolution 241. This resolution, introduced by 20 senators from states served by the M.P., directed the committee to find out, among other things, why the plan made no provision for participation by old common stockholders. It was stated that unless these stockholders were given some recognition in the reorganized company the plan might be rejected by the courts and thus delay bringing the M.P. out of bankruptcy.

The present plan, on which the commission itself is divided, was approved in August, 1949; it is a revision of two previous plans promulgated by the commission. (See *Railway Age* of August 20, 1949, page 67). Earlier plans were approved in 1940 and 1944, but each time they were returned by the courts. The present plan, among other things, increases capitalization of the M.P. to $612,000,000, but again makes no provision for participation of old common stockholders in the reorganized company. The new plan also proposes a merger into one company of the M.P., the New Orleans, Texas & Mexico, the International-Great Northern, and other smaller subsidiaries.

Commissioner Mahaffie's presentation before the Senate committee was in support of the plan. He referred to the "multiplicity of conflicting interests" among creditors and stockholders, and in general undertook to justify the commission's finding that a just capitalization for the M.P. system would be $612,000,000.

Repeats Objection

The principal objection raised by Commissioner Alldredge was the same as that expressed in his earlier dissent. He would add a "conditional increase" of about $155,000,000 to the capitalization figure, but the increase would not become final unless annual earnings for an additional 3-year period equalled the 1946-48 average of $34,500,000. He said this increased capitalization would permit "substantial recognition" to be given the old common stockholders.

Senator Johnson later said this seemed to him to be a "good idea," and said he thought future earnings of the M.P. would hold up due to the "phenomenal development" of the territory served by the road. Commissioner Alldredge said he saw no reason to wipe out the common stockholders until earnings showed it had to be done, and he said the crux of disagreement among the commissioners was over the "grass roots task of forecasting future earnings."

Other witnesses at the Senate hearing included Commissioner Splawn, representatives of bondholding groups, the road's management, and a representative of the common stockholders' Protective Committee. James G. Lyne, editor of *Railway Age*, made a general presentation with respect to railroad financing, in which he discussed the need for new capital and the need to establish conditions in the industry that will bring in this new capital.

The bondholding groups in general were in support of the commission's newest plan. Eugene A. Schmidt, a vice president of the Metropolitan Life Insurance Company, said the commission was "wholly justified" and "could not have done otherwise" in declaring the old common stock to be valueless. He added that value cannot be created by legislative fiat, and declared that at the assumed level of earnings there would be no possibility of a dividend on old M.P. common stock for over 113 years. Mr. Schmidt represented holders of approximately $39,000,000 of M.P. bonds. Philip E. Gregg, appearing on behalf of the trustee of M.P. convertible gold bonds also said the I.C.C. "has dealt generously" with present stock interests.

Objectors to the plan were concerned with the "plight" of the common stockholders, the proposed merger of the various roads into a single system, and the role which the old management would have in the new company. Commissioner Splawn disagreed with the merger plan, but agreed with Senator Johnson that the principal job was to get the road out of bankruptcy in the shortest possible time.

T. C. Davis, chairman of the board of the M.P., introduced evidence designed to show where control of the road would be under the reorganization plan. He objected to findings by the commission that a "normal year's earnings" would be about $25,450,000, and said that in 1949, a strike year, the road earned over $29,000,000. He said the I.C.C. "is so blinded by Alleghany they can't see anything beyond it." He was presumably referring to Alleghany Corporation's ownership of a large block of M.P. common, and to the active role Alleghany has taken in the reorganization. Mr. Davis also objected to restrictions which would not permit the old management to be represented among the reorganization managers, and to being limited to one director on the first board of the new company.

Mrs. Helen Munsert spoke for the common stockholders' committee, and urged that the Senate "direct the commission to correct its mistake." She would have the commission request the court to return the reorganization plan, so provisions to take care of the stockholders can be written in. In general she endorsed Commissioner Alldredge's plan for protecting the stockholders.

Merger Opposed

A holder of N.O.T.&M. secured serial bonds, J. S. Elliott, attacked the I.C.C. plan to merge this road into the M.P. system. He said the M.P. was "relatively weaker," and added that the commission reached an "amazing conclusion" when it decided the merger was necessary. Delancey C. Smith, another witness opposing the merger plan, charged the M.P. with keeping the New Orleans company in bankruptcy "solely" on the basis of an intercompany debt. Mr. Smith said the idea that the New Orleans should be a part of the M.P. system "is perfectly silly," and charged that the commission plan is "absolutely unfair."

CAR SERVICE

I.C.C. to Get Reports On Bad Order Situation

By Service Order No. 849, the Interstate Commerce Commission has directed its Bureau of Service to obtain, effective

April 15, semi-monthly reports on the number of unserviceable freight cars in excess of 5 per cent of car ownership which are held for repair on Class I roads. The reports, which will continue through August 15, will be furnished to the I.C.C. by the Car Service Division, Association of American Railroads. In addition to cars being held for repair, each report will show the number of cars repaired in the preceding semi-monthly period and the number programmed for repair in the ensuing period.

The service order was issued by the commission on April 14. The increasing shortages of freight cars, particularly in the west, and the "materially increased" number of unserviceable cars have created an "emergency" situation, the commission said.

Homer C. King, who as director of the Bureau of Service will handle the semi-monthly reports, said the number of bad order cars on March 1, 1950, was 52 per cent higher than the same date a year ago. He said most recent figures "indicate an effort to step up repair programs," and added that according to Car Service Division reports the backlog of bad order cars was reduced by 11,000 in March. Mr. King said the information he would get from the C.S.D. under the new service order would keep the I.C.C. up to date on the bad order situation.

ORGANIZATIONS

The **Coordinated Mechanical Associations,** comprising six associations of railway mechanical department supervisors, will hold their next annual meeting at the Hotel Sherman, Chicago, September 18-20. Owing to lack of accommodations for all six associations simultaneously at the Sherman, meetings of the **Car Department Officers Association** will be held at the Hotel LaSalle, but the members will participate in all joint functions at the Sherman. An exhibition of railway equipment and supplies, electrical in character, will be sponsored by the **Railway Electric Supply Manufacturers' Association.**

John C. Burchmore, attorney for the National Industrial Traffic League, will address the **Clearing-Cicero Traffic Conference,** Chicago, on April 27, which is "Rail Transportation Night." John Kocian, of the Pennsylvania, is chairman of the rail committee of the conference.

The date for the Rutland, Vt., meeting of the Loss & Damage Prevention Committee of the **New England Shippers Advisory Board** has been changed from May 9 to May 4, at 6:30 p.m. at the Rutland Country Club.

The **Pacific Coast Transportation Advisory Board** recently elected the following officers for 1950-51: General chairman, J. W. Witherspoon, United States Rubber Company, Los Angeles, Cal.; vice-general chairman, George D. Cron, Chevrolet-Oakland Division, General Motors Corporation, Oakland, Cal.; and general secretary, Robert C. Neill, California Fruit Growers Exchange, Los Angeles.

OVERSEAS

Great Britain.—Traffic receipts of the British railways and allied services in 1949 totaled an estimated £414,517,000, according to preliminary figures published in the Railway Gazette (London). "Some indication of the manner in which costs have been rising on the railway," the Gazette says, "may be gathered from the fact that the estimated deficit in net revenue of some £20,000,000 for 1949 compares with a loss of £10,259,000 in railway gross receipts."

Iraq.—The Iraqui State Railways are in the market for chilled wheels for standard-gage oil tank cars, according to a recent issue of Foreign Commerce Weekly. The cars were purchased from the Foreign Liquidation Commission at the end of the recent war and it was said the State Railways would prefer to buy wheels from dealers who acquired them from the commission. Specifications are available on a loan basis from the Commercial Intelligence Branch, Department of Commerce, Washington 25, D. C.

SUPPLY TRADE

O. C. Duryea Corporation and Hulson Company Merged

Announcement has recently been made of the merger of the O. C. Duryea Corporation, manufacturers of cushion underframes, into the Hulson Company, Chicago, makers of lightweight friction draft gear and locmotive grates. Hulson has announced that it will continue and expand Duryea's engineering activities and sales in addition to those of its own established products.

V. R. Weiss, formerly president of Duryea, has been elected a director of the Hulson Company. J. R. Gillette, vice-president of Duryea, has become a vice-president of Hulson with headquarters in Chicago, and W. E. Heaton continues for Hulson in Baltimore, Md. S. Simonson, chief engineer of Duryea, remains in charge of all engineering, service and inspection relating to Duryea production, with headquarters as before at Butler, Pa.

Although Hulson will continue to maintain the Baltimore office of Duryea, all communications pertaining to the merged companies should be addressed to the principal office of the Hulson Company at 332 South Michigan avenue, Chicago 4.

Nelson M. McGuire, advertising manager of the National bearing division, **American Brake Shoe Company,** has been appointed also division advertising manager of the company's American manganese steel division, with headquarters at Chicago Heights, Ill.

Columbus Basile, whose election as vice-president—operations of the **Link-Belt Speeder Corporation** (subsidiary of the **Link-Belt Company**), with headquarters at Cedar Rapids, Iowa, was reported in the *Railway Age* of April 15, began his career with the Link-Belt Company at its Pershing Road plant, Chicago, in 1928. Subsequently he engaged in general shop work until 1938, when he became a division manager for Sears, Roebuck & Co.

Columbus Basile

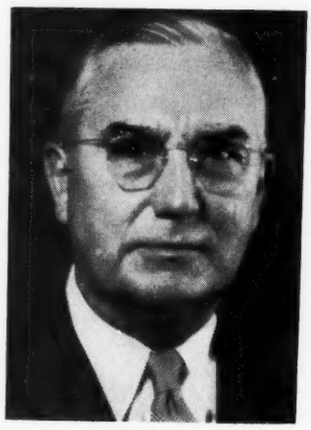
Following his return to Link-Belt in 1941, Mr. Basile served successively as foreman of the machine shop at Link-Belt Ordnance Company (also part of the Link-Belt Company), Chicago, and as head of time-study and methods at Link-Belt's Philadelphia (Pa.) plant. He was appointed shop superintendent at the Caldwell plant, Chicago, in December, 1947, the post he held prior to his election as vice-president—operations at Cedar Rapids.

John G. Hubbard has been appointed field engineer for the **Republic rubber division,** Lee Rubber & Tire Corp., with headquarters at Columbia, S. C. Mr. Hubbard will represent Republic in South Carolina and north Georgia.

Raybestos-Manhattan, Inc., has moved its department of marketing and merchandising to executive headquarters at 61 Willett street, Passaic, N. J. The New York offices, formerly at 120 Broadway, have been moved to 500 Fifth avenue.

James H. Watters, president of the **Union Asbestos & Rubber Co.,** with head-

quarters at Chicago, has been elected chairman of the board. Elected to succeed Mr. Watters is **Norman C. Naylor,** vice-president at Chicago. A former vice-presi-



James H. Watters

of the New York Air Brake Company, Mr. Watters served as president of the Marion Steam Shovel Company, Marion, Ohio, for a number of years prior to joining Union Asbestos. He has been president of that company since 1941.

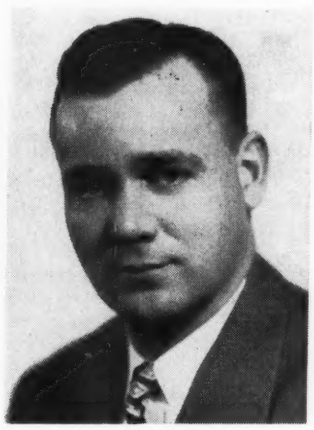
Mr. Naylor was associated with the American Locomotive Company as vice-president in charge of western sales offices from 1930 to 1947, and subsequently

Norman C. Naylor

served as vice-president in charge of sales at New York. He came to Union Asbestos in July, 1948, as vice-president. From 1943 to 1947, Mr. Naylor served as president of the Railway Supply Manufacturers Association, and is at present chairman of the executive committee of the Railway Business Association.

John E. Younkin has been appointed Pittsburgh, Pa., district manager of the wood preserving division of **Koppers Company,** to succeed **Frank H. Fischer,** whose promotion to assistant general manager of the division was announced in *Railway Age* of April 8. Mr. Younkin formerly was district procurement manager at the division's Marietta, Ohio, office.

James W. Eaton has been appointed sales engineer of **Sperry Rail Service,** division of **Sperry Products, Inc.,** with headquarters at 80 East Jackson boule-



James W. Eaton

vard, Chicago. Mr. Eaton was graduated from the University of Illinois and formerly was sales engineer for the Chicago Pneumatic Tool Company.

OBITUARY

T. O. Sechrist, vice-president of the Hanna Stoker Company since December, 1948, died on April 2, at Louisville, Ky., after a long illness. Mr. Sechrist formerly was associated with the Louisville & Nashville for 34 years, and at the time of his retirement from that road in January, 1948, was assistant superintendent of machinery.

EQUIPMENT AND SUPPLIES

FREIGHT CARS

The **Reading** has ordered 500 50-ton 40½-ft. steel box cars from the American Car & Foundry Co. at an approximate cost of $2,500,000. Inquiry for these cars, delivery of which is scheduled to begin in the third quarter of 1950, was reported in *Railway Age* of March 18, page 89.

SIGNALING

The **Atchison, Topeka & Santa Fe** has ordered from the Union Switch & Signal Co. materials to install an intermittent inductive automatic train stop system on a total of 953 road mi., extending over several portions of its Chicago-Los Angeles line; between Santa Ana, Cal., and Sorrento on its Los Angeles-San Diego line; and between Gainesville, Tex., and Saginaw on its Chicago-Fort Worth-Galveston line. The orders include equipment for 103 Diesel and 42 steam passenger locomotives, track inductors and other materials to equip the wayside locations.

The Lima-Hamilton Corporation has ordered 16 sets of intermittent inductive train control equipment from the General Railway Signal Company. This equipment will be installed on Diesel-electric switching locomotives for the **New York Central.**

CONSTRUCTION

Duluth, Missabe & Iron Range.—The following projects have been approved, at the indicated estimated costs: Steel decks on two bridges near Superior, Wis., to be placed by company forces ($77,500); steel pocket linings on one-half of Ore Dock No. 6 at Duluth, Minn., $200,000, to be installed under contract; track systems for Virginia, Minn., sintering plant, $110,000 and new gravel washing plant at Saginaw, Minn., $35,000, grading for both to be done by contract and construction and ballasting by company forces.

New Orleans Union Passenger Terminal.—A contract for complete construction of express facilities at a cost of $359,000 for this publicly owned station has been awarded to the Keller Construction Company of New Orleans. The facilities will consist of a steel frame warehouse with floor area of approximately 25,000 sq. ft. at car-floor level; and three canopy covered car-floor level loading platforms between tracks, each platform 20 ft. wide and approximately 380 ft. long. Temporary station facilities, under construction by the Keller company under a separate contract, will be completed some time this month. These facilities, described in the *Railway Age* of December 3, 1949, page 67, will cost approximately $175,000. The next major project to be undertaken will be the Diesel shop building, plans for which are nearing completion.

Pennsylvania.—Negotiations have been completed by this road with the city of Pittsburgh, Pa., for rearrangement of city streets involved in construction of the P.R.R.'s $4,500,000 warehouse and $20,000,000 passenger station improvement program (see *Railway Age* of February 5, 1949, page 118, and March 5, 1949, page 68). J. A. Appleton, P.R.R. vice-president, turned over to the city a check for $25,000, the price set by the city for relinquishing to the railroad the following streets and alleys: Slocum way; 13th and 15th streets between Penn and Liberty avenues; Spring way between 11th and 16th streets, and the southerly 20 ft. of Liberty avenue between 11th

street and a point between 14th and 15th streets. The railroad is giving the city, without cost, 20-ft. strips for widening 12th and 14th streets between Penn and Liberty avenues. A strip of similar width is being transferred by the P.R.R. for relocation of Liberty avenue between 11th street and a point between 14th and 15th streets. Mr. Appleton pointed out that the railroad would spend an estimated $475,000 for widening and relocation work, including costs for resurfacing streets and relocating public and private utility facilities. "With this transaction," he added, "we are happy to be under way again on both our warehouse and station improvement projects."

FINANCIAL

I.C.C. Approves B.&M. Stock-Adjustment Plan

Division 4 of the Interstate Commerce Commission has conditionally approved this road's plan for modifying its outstanding stock under provisions of the so-called Mahaffie Act as now embodied in section 20B of the Interstate Commerce Act. The conditions imposed by the commission will increase, from the usual 75 per cent to 87 per cent, the percentage of assenting votes required with respect to one of the four classes of stock involved, and change the ratios of exchange used in the distribution of the new securities to present stockholders.

With those amendments, the commission's report, in Finance Docket No. 16250, authorizes submission of the plan to the affected stockholders for acceptance or rejection. The stock issues involved are all those the B. & M. now has outstanding, i.e., 7 per cent, cumulative prior preference; five series of cumulative first preferred, ranging in dividend rates from 42 per cent to 10 per cent; 6 per cent, non-cumulative preferred; and common.

The purpose of the adjustment plan is to simplify the road's capital structure by reducing the number of classes of stock, and to clear up dividend arrearages.

The plan provides for cancellation of these arrearages, and for reduction of the aggregate par value of the road's capital-stock structure from $104,347,300 to $82.238,031. The latter would be represented by 822,380.31 shares of new stock of $100 par value, which would be divided into two classes—275,296.8 shares of new 5 per cent preferred, and 547,083.51 shares of new common. An additional 481,769.4 shares of the new common would be authorized to provide for conversion of the new preferred on the basis of 1¾ shares of common for each share of preferred.

In the distribution of new securities, holders of the present 7 per cent, cumulative prior preference stock would receive all of the new preferred and some of the new common. For each share of prior preference stock now held, they would get 1.2 shares of the new preferred and 1 share of the new common. Following are the five present series of first preferred and the amount of new common stock that would be exchanged for each share thereof: 5 per cent series A, 0.65 share; 8 per cent series B, 0.85 share; 7 per cent series C, 0.79 share; 10 per cent series D, 1.05 shares; 4½ per cent series E, 0.6 share. Each share of the present non-cumulative, 6 per cent preferred would be exchanged for 0.07 share of the new common, while each share of the present common would receive 0.05 share of the new common.

The foregoing ratios reflect the amendments to the plan which were required by the conditions imposed by the commission. The net effect is to reduce the total number of shares of new common stock to be issued from 549,134.98 shares of 547,083.51. The 87-per-cent-assent condition applies to non-cumulative preferred. It was imposed because more than 68 per cent of this stock is held by the Pennroad Corporation (47.52 per cent) and the Boston Railroad Holding Companv (20.77 per cent). The total holdings of these two companies amount to 42.91 per cent of all present B.&M. stocks, the Boston Railroad Holding Company being owner of 55.53 per cent of the common.

As to dividends on the new preferred stock, the plan provides that they would be based on B.&M. earnings after deduction of fixed and contingent charges, including sinking-fund obligations now or hereafter established with respect to its funded debt. If earnings are sufficient in any year for the payment of all or any part of the dividends upon the new preferred stock, but dividends are not paid for that year, such earnings (up to the amount called for by the dividend rate) would accumulate in favor of the preferred stock. There would also be sinking-fund provisions contemplating purchase or redemption of the preferred stock.

Bangor & Aroostook Revamp Plan Approved by I.C.C.

Division 4 of the I.C.C. has approved this road's plan for modifying its outstanding bonds under the so-called Mahaffie Act, now embodied in section 20b of the Interstate Commerce Act. The commission's decision, in Finance Docket No. 16758, authorizes submission of the plan to holders of the securities affected for acceptance or rejection. No opposition was expressed at hearings in the case.

The securities affected are $16,665,000 of consolidated refunding mortgage, 4 per cent bonds, and $3,450,000 of collateral trust, 4 per cent bonds. As now set up, both issues would mature on July 1, 1951, and the plan was proposed when the road determined that it would have insufficient funds to meet the maturities. As the summary of the commission's report put it, the B.&A. seeks by the plan "to avoid the alternative of receivership or bankruptcy."

The consolidated refunding mortgage bonds would be modified, principally by increasing the interest rate from 4 to 4½ per cent, extending the maturity date to July 1, 1976, redesignating the bonds as "first mortgage, 4½ per cent bonds," and making them a closed issue limited to $16,665,000 maximum principal amount at any time outstanding. In addition, these bonds would be made redeemable at 104 per cent through July 1, 1951, the redemption price thereafter decreasing one-fourth of 1 per cent each year to 100 per cent after July 1, 1966. These prices would not apply to redemptions for sinking-fund purposes, for which the redemption price would be 100 at any time.

With the exception of $4,200,000 principal amount ($2,000,000 to be held in the B.&A. treasury and $2,200,000 which have been pledged), the modified bonds would be convertible into common stock on the basis of 20 shares ($50 par) for each $1,000 principal amount of the bonds. All bonds thus converted would be canceled, and no first mortgage bonds could thereafter be issued in lieu of them. If the conversion option were fully exercised, it would call for issuance of 249,300 shares of common stock of the total par value of $12,465,000. The aggregate par value of B.&A. common now outstanding is $7,089,600.

The collateral trust bonds involved are held by the Reconstruction Finance Corporation; and the plan contemplates that all in excess of $3,000,000, i.e., $450,000, will be retired at par and accrued interest on or before the effective date of the plan. The R.F.C. has agreed to this, and the necessary funds have been deposited in escrow. The remaining $3,000,000 of these bonds would be modified, principally, by extending the maturity date to July 1, 1961, making them a closed issue limited to $3,000,000 maximum principal amount at any time outstanding, and making them redeemable. Except for the sinking-fund price, which would be 100, the redemption price would be 103⅜ through July 1, 1951, thereafter decreasing ⅜ of 1 per cent each year to 100 after July 1, 1959.

Sinking-fund provisions would call for payments annually out of available net income to permit retirement, under normal conditions, of the $3,000,000 collateral trust bonds by their new maturity date of July 1, 1961. Until that issue was retired, sinking-fund arrangements applicable to the mortgage bonds would be on a contingent basis. No dividends would be declared or paid on any class of capital stock so long as any deficit in sinking fund payments existed.

Boston & Maine.—*Property Sale Approved.*—Stockholders of this road at its recent annual meeting voted to sell to the Suncook Valley the B. & M.'s 5½-mi. single-track line between Bow Junction, N. H., and Suncook.

Cedar Rapids & Iowa City.—*Acquisition.*—The I.C.C. has approved acquisition by this company of the electric railway

News Department continued on next left-hand page

ANNUAL REPORT—1949

THE NEW YORK CENTRAL RAILROAD COMPANY

Again in 1949 the New York Central performed a large volume of work for relatively little return.

Railroad wage rates and material prices in the east have climbed an average of about 105 per cent in the last decade, whereas our 1949 ton-mile revenues had increased only 58.7 per cent and our passenger-mile revenues only 24.1 per cent from 1939. Thus the railroad industry still is beset by inability to eliminate the inflation-created gap between basic unit revenues and basic unit expenses.

Fundamental to this difficulty is the hurtful practice of extracting immense sums from taxpayers' pockets for the benefit of over-the-road truckers, airlines and waterways, which cloaks the true costs of these forms of transportation in a cloud of subsidies. A recent book, published by the Brookings Institution and based partly on a study undertaken at the request of the Hoover Commission, estimates such federal subsidies will be over $1,350,000,000 this year; and that the 1947 total spent by federal, state and local governments for transportation facilities and services not paid for by the users was approximately $2,500,000,000.

There is increased public understanding that this uneconomic situation is an unnecessarily wasteful drain on the nation, its taxpayers and its railroads.

Revenues affected by strikes

Traffic volume and revenues were reduced in 1949 by strikes and walkouts equivalent to more than 3½ months in the bituminous coal fields and approximately one month at most steel mills, and by a moderate slackening in general business activity.

Operating revenues thus fell to $697,304,399, down 10.6 per cent from 1948. The effect would have been even more pronounced except for certain further moderate increases in rates and fares.

Freight revenues totaled $500,919,039, a decline of $60,442,204 or 10.8 per cent. Total freight volume, measured by revenue ton-miles, fell 18.0 per cent. More than two-thirds of our tonnage drop was in bituminous coal and steel mill traffic.

Passenger revenues, in a postwar decline accentuated by the 15 per cent wartime tax on transportation, dropped 10.1 per cent to $122.451,363. Travel volume, as reflected by revenue passenger-miles, fell 15.9 per cent.

Expenses closely controlled

With revenues dropping and costs simultaneously rising because of the required inauguration Sept. 1, 1949, of the five-day, 40-hour week with virtually unchanged pay for all non-operating employes, rigid controls were maintained over all expenses. The new work week represented, in effect, a 20 per cent wage increase for approximately four of every five New York Central employes.

Operating expenses were reduced 10.5 per cent to $597,038,307. Maintenance of way expenditures, down 17.1 per cent, were curtailed particularly during the last five months of 1949. Through various shutdowns of car and locomotive shops, and by greater efficiencies, maintenance of equipment expenditures were cut 12.9 per cent.

Even with these economies, however, our net railway operating income reflects a rate of return of only 1.8 per cent on depreciated investment.

Net income totals $9,727,816

Net income totaled $9,727,816, equal to $1.51 per share, compared with $14,727,096 or $2.28 a share for the previous year.

The 1949 figure represented a profit of only 1.4 cents of every dollar we received. This total was $719,534,282, of which $697,304,399 was railway operating revenues and $22,229,883 represented the Central's other income.

Because of uncertainties in the business picture, particularly in the coal fields, and because of the continued need for capital expenditures to achieve further modernization and greater efficiency, at the close of 1949 your board of directors felt that it would not be in the best interests of the company and its stockholders to declare a dividend.

Modernization goes forward

The Central continued in 1949 its equipment modernization program, which enables us to maintain service at competitive standards while obtaining operating economies to improve our earning power.

Further deliveries of diesel-electric locomotives helped bring the Central's proportion of dieselized and electrified mileage to an average of 28.7 per cent for 1949, compared with 21.0 per cent for 1948. Delivery of locomotives on order is expected to increase this to more than 35 per cent.

Interest increase relatively moderate

To finance our new diesels and cars, the Central issued last year equipment trust certificates totaling $53,265,000, repayable serially in one to fifteen years. Partly offsetting these, we retired at maturity or by purchase $18,393,280 of older debt, including that of lessor companies, and reduced by $832,655 the amounts due to the State of New York in grade crossing eliminations.

Thus, although $53,265,000 was borrowed to help finance new equipment, public-held debt increased by only $34,039,065, or 3.88 per cent, while annual interest requirements increased by only a relatively moderate 3.04 per cent.

Some things which are needed

The Central, like the railroad industry in general, has a number of essential needs. These include:

Correction of the competitive transportation situation; a more cooperative and realistic attitude, particularly by state regulatory commissions, toward discontinuance of passenger trains which the public itself already has largely abandoned; relief from seemingly incessant demands for more pay for less work; repeal of the wartime transportation taxes of 15 per cent on passenger travel and 3 per cent on freight traffic; and early action on the railroads' application for long overdue increases in compensation for hauling mail.

Although further desirable objectives could be mentioned, action on these, or even some of them, would be highly constructive and beneficial.

The future appears brighter

Because our business volume is geared so closely to the unpredictable national economy, and because we are faced again with costly new wage demands, it is difficult to make accurate forecasts.

It is our present belief, however, that despite the poor start brought by the paralyzing coal strike early in 1950, this year should prove a more constructive one for the Central than was 1949.

Long range prospects are even better, as we come closer to intelligent action on the competitive difficulties created by large subsidy handouts.

G. METZMAN,
President

March 20, 1950

For copy of Annual Report containing Comparative Income Account, Balance Sheet, etc., address Public Relations Dept., New York Central System, 466 Lexington Avenue, New York 17, N. Y.

(Advertisement)

properties of the Iowa Electric Light & Power Co. The C.R.&I.C., which prior to this time owned no railroad property, will remain a wholly owned subsidiary of the light company, with the latter holding a $750,000 promissory note and all the common stock of the railroad company. The rail facilities involved include 27.15 mi. of single track line between Cedar Rapids, Ia., and Iowa City, together with sidings, yard tracks, and operating equipment. The commission's report said this transaction was merely "the segregation of the light company's railroad property from its other properties and conveyance thereof to a . . . subsidiary." The move will avoid duplication in regulation of the power company by various state and federal commissions.

Georgia, Florida & Alabama.—*Plans of Reorganization.*—Division 4 of the I.C.C. has ordered that this road's plan of reorganization be submitted to interested security holders for acceptance or rejection. The holders of first and refunding 6 per cent bonds and first preferred debenture stock will pass on the reorganization plan, already approved by both the I.C.C. and the U.S. District Court for the Middle District of Georgia. Holders of record as of April 10 will vote. The commission set May 9 as the deadline for returning ballots.

Lehigh & New England.—*Trackage Rights.*—The I.C.C. has approved an amendment to the existing trackage rights agreement between this road and the New York, Susquehanna & Western — involving 18.5 mi. of line between Hainesburg Junction, N. J., and Swartswood Junction — so as to increase tonnage rates paid by the L.&N.E. for use of the Susquehanna line. The new rates per ton-mile, made effective retroactive to January 12, 1948, are on the following graduated scale: $0.00393 for the first 30 million ton-miles per year, $0.00327 for the next 10 million ton-miles, and $0.00196 for all ton-miles over 40 million. The present agreement dates from 1923, although it was amended in 1938 to increase the then-existing ton-mile rates.

New York Central.—*Vacates 1930 Order Authorizing Stock Issue.*—Granting a request made by this road, Division 4 of the I.C.C. has vacated a March 4, 1930, order which authorized the road to issue $7,500,000 of capital stock, consisting of 75,000 shares of the par value of $100 each, "to be sold for $130 a share" and the proceeds used for new and improved facilities and equipment. The Central's request for revocation of the authorization was made in a March 31 petition which stated that none of the stock had been issued, and that the road's stock has been changed from the par value of $100 to stock without par value. The proceeding involved was Finance Docket No. 8078.

Tennessee Central.—*R.F.C. Loans.*—Having approved extension by the Reconstruction Finance Corporation of this road's outstanding loans, from April 1, 1950, to April 1, 1960, and also having approved a new loan covering unpaid interest of $375,000, the I.C.C. has now authorized the T.C. to issue a promissory note or notes to the R.F.C. as evidence of such extension and of the new loan. The note or notes, totaling $5,607,300, will be dated April 1, and bear interest at 4 per cent. They will be secured by $6,216,000 of the T.C.'s first mortgage 4 per cent bonds, series A. (See *Railway Age* of March 18, page 90.)

New Securities

Application has been filed with the I.C.C. by:

Nashville, Chattanooga & St. Louis.—To assume liability for $4,800,000 of series F equipment trust certificates to finance in part 43 Diesel-electric locomotives to be acquired from Electro-Motive Division, General Motors Corporation, at an estimated total cost of $6,018,413:

	Description	Estimated Unit Cost
10	1,500-hp. road "A" units	$164,611
6	1,500-hp. road "B" units	159,623
4	1,500-hp. road-switchers, passenger service	149,577
13	1,500-hp. road-switchers, freight service	141,309
10	1,200-hp. switching units	97,924

The certificates, to be dated May 1, would mature in 15 annual installments of $320,000 each, beginning May 1, 1951. They would be sold by competitive bids, with the interest rate set by such bids.

Division 4 of the I.C.C. has **authorized**:

Chicago, Burlington & Quincy.—To issue and sell $25,000,000 of first and refunding mortgage bonds, series of 1990, proceeds from the sale of which will be used for two purposes: to redeem or purchase $12,460,100 of C.B.&Q. first and refunding mortgage, 4½ per cent, series B bonds that are callable February 1, 1952, at 105; and to reimburse the company treasury in part for net capital expenditures made on a new line of railroad between Missouri City Junction, Mo., and Needles Junction. (See *Railway Age* of March 25, page 77)

The new bonds will bear interest at 3 per cent. Successful bid for the issue was made by Morgan Stanley & Co. and 19 associates—with an offer of 99.53, making the average annual cost of the proceeds approximately 3.02 per cent. The bonds were reoffered to the public at par.

The series B 4½ per cent bonds being called would normally mature February 1, 1977. The new bonds will mature February 1, 1990.

Lackawanna & Wyoming Valley.—To issue, from time to time, trustee's certificates of indebtedness to provide a working cash fund to meet current liabilities and expenses. The certificates will be dated as issued, bear interest at 4 per cent, and will be payable one year from date. They will be sold at par, and will constitute a first lien upon the road and all its property, earnings and income. Division 4's report said the issue of certificates was authorized by the reorganization court on February 10.

Dividends Declared

Little Miami.—special stock, 50¢, quarterly, payable June 10, September 9, December 9, and March 10, 1951, to holders of record May 23, August 23, November 21, and February 20, 1951; $4.30 original stock, $1.10, payable June 10, September 9 and December 9, and $1 payable March 10, 1951, to holders of record May 23, August 22, November 21 and February 20, 1951.

Northern of New Hampshire.—$1.50, quarterly, payable April 29 to holders of record April 13.

Ontario & Quebec.—$3.00, semi-annual, payable June 1 to holders of record May 1.

Average Prices Stocks & Bonds

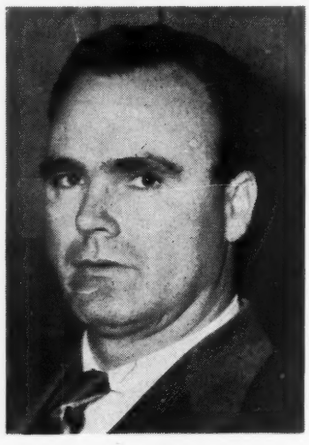
	Apr. 18	Prev. week	Last year
Average price of 20 representative railway stocks	42.75	42.33	39.50
Average price of 20 representative railway bonds	92.76	93.07	87.25

RAILWAY OFFICERS

EXECUTIVE

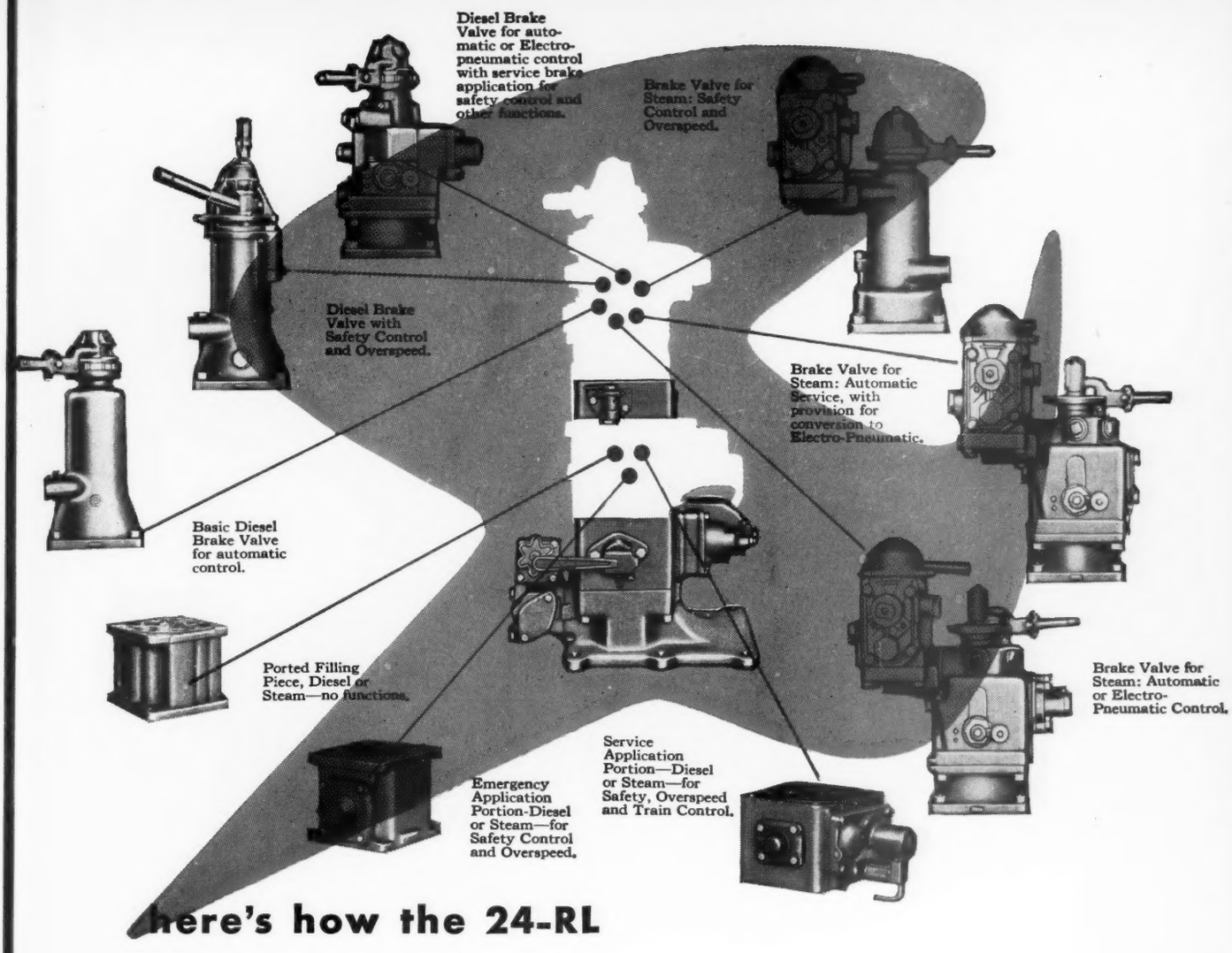
Ernest C. Nickerson, vice-president and assistant to president of the New York, New Haven & Hartford, with offices at New Haven, Conn., and Boston, Mass., has resigned. **Harry W. Dorigan,** assistant vice-president, real estate and real estate taxes, at New Haven, has retired.

Mr. Nickerson was born on August 4, 1909, at Chatham, Mass., where he attended the public schools. He was graduated from Philips Exeter Academy in 1928; Harvard College (B.S. 1932); and Harvard School of Business Administration (M.B.A. 1934). Mr. Nickerson began his career as a freight handler and clerk for the Eastern Steamship Lines in 1933, and the following year joined the Luckenbach Steamship Lines, serving as solicitor and traveling freight agent until 1936. In the latter year he entered railroad service with the New Haven as traffic representative, becoming special assistant to vice-president in 1937. During 1940 and 1941 Mr. Nickerson was on leave of absence from the New Haven to act as research assistant for the Fruit Growers Express Company, returning to the New Haven in 1942 as assistant manager of sales and service. He was appointed manager of traffic research and



Ernest C. Nickerson

News Department continued on next left-hand page


Diesel Brake Valve for automatic or Electro-pneumatic control with service brake application for safety control and other functions.
Brake Valve for Steam: Safety Control and Overspeed.
Diesel Brake Valve with Safety Control and Overspeed.
Brake Valve for Steam: Automatic Service, with provision for conversion to Electro-Pneumatic.
Basic Diesel Brake Valve for automatic control.
Ported Filling Piece, Diesel or Steam—no functions.
Brake Valve for Steam: Automatic or Electro-Pneumatic Control.
Service Application Portion—Diesel or Steam—for Safety, Overspeed and Train Control.
Emergency Application Portion-Diesel or Steam—for Safety Control and Overspeed.

here's how the 24-RL

"Stacks Up" against braking needs

Based on the modern principle of combining interchangeable parts with various functions, the Westinghouse 24-RL brake equipment is readily adapted to meet the operating requirements of any service. It is particularly suited to modern "assembly line" production of road locomotives, whose assignments may be undetermined when construction starts; functional sections with the desired function may be inserted as requirements are established.

A further advantage comes when locomotives enter service, as substitutions of parts to provide added functions can be readily made, with no change in basic piping.

For more information, ask for Catalog No. 2058.

The RAILROAD HOUR
NBC NETWORK Every Monday Night

Brakes are Basic to Railroad Progress

Westinghouse Air Brake Co.

WILMERDING, PA.

development in 1944 and later that year was granted a leave of absence to act as director of the traffic sub-committee of the Railroad Committee for the Study of Transportation, Association of American Railroads. He was appointed assistant general traffic manager of the New Haven in 1946; general traffic manager in 1947; vice-president—traffic in 1948, and vice-president and assistant to president in 1949. Since 1947, Mr. Nickerson has been director and vice-president of the Providence Produce Warehouse Company; chairman of Committee A-B, Eastern region, Railway Express Agency, and a member of the Committee on Railway Mail Pay. He is a member of the Committee on New York City Suburban Transit and of the governor of Connecticut's Steel Plant Committee.

Mr. Dorigan was born at Taunton, Mass., on November 23, 1895, and entered railroad service in 1914 with the New Haven, serving successively until

Harry W. Dorigan

1924 as clerk in the office of the auditor of disbursements at New Haven and in miscellaneous positions in the accounting and operating departments at various points. From September, 1917, to February, 1919, Mr. Dorigan was in the United States Army serving overseas as a second lieutenant and received the Order of the Purple Heart. From 1924 to 1930 Mr. Dorigan was special accountant of the New Haven at New Haven; then served until 1933 as assistant to comptroller at New Haven. He became assistant to vice-president at New Haven in 1933; assistant to president at New Haven in 1934; executive assistant to trustees in 1935, and assistant vice-president in 1947.

W. H. Armbrecht, Jr., vice-president and general counsel of the Alabama, Tennessee & Northern, has been elected president, with headquarters as before at Mobile, Ala.

William J. Warnick, assistant to the president of the Toronto, Hamilton & Buffalo at Hamilton, Ont., has retired under the company's pension regulations, after more than 54 years of continuous service. Mr. Warnick was born at Hamilton on March 16, 1880, and entered railroad service in January, 1896, as junior clerk and telegrapher with the T. H. & B. He was appointed train dispatcher in 1901; chief dispatcher in 1910; trainmaster in 1912; superintendent in 1915, and assistant to president on August 16, 1947.

OPERATING

H. A. Hansen, manager of the dining car and hotel department of the Union Pacific, at Omaha, Neb., will retire on May 1, after 48 years of service.

M. W. Tompkins has been appointed trainmaster of the Buffalo division of the New York Central at Buffalo, N. Y.

TRAFFIC

B. Gregory Ryan has been appointed general agent, freight traffic department, of the New York Central System at Columbus, Ohio, succeeding **J. L. Robinson,** assigned to the staff of the freight traffic manager at Cleveland, Ohio.

H. L. Ford, whose appointment as general freight traffic manager in charge of sales and service for the Chicago, Burlington & Quincy at Chicago, was reported in the *Railway Age* of March 4, was born at Canon City, Colo., on May 30, 1894, and received his education in the public schools of Colorado Springs, Colo., and at Iowa State College, Ames, Iowa.

H. L. Ford

His railroad service began in 1920 in the agricultural development department of the Burlington, where he served until 1934. Subsequently he was appointed general agent, and in 1936 was advanced to assistant freight traffic manager, becoming freight traffic manager at Chicago in January, 1940, the position he held at the time of his recent appointment.

The Toledo, Peoria & Western has opened a traffic office at Philadelphia, Pa., to serve parts of Pennsylvania, New Jersey and Maryland, all of Delaware and Virginia, and the District of Columbia. **Gerard F. Miller,** general agent at New York, has been transferred in that capacity to the new office.

R. P. McKemie has been appointed general agent of the Chicago & Eastern Illinois at Jacksonville, Fla., succeeding **G. H. Nourse,** retired.

Fred E. Deines, whose promotion to freight traffic manager, Lines West, of the Chicago, Burlington & Quincy at Omaha, Neb., was reported in the *Railway Age* of March 4, was born on November 1, 1911, at Harvard, Neb. Mr. Deines attended high school at Omaha, where he entered railroad service in January, 1928, as an office boy in the Burlington's transportation department. Subsequently he served in various clerical positions in the general offices at Omaha until 1937, when he was trans-

Fred E. Deines

ferred to Minneapolis, Minn., as chief clerk to general agent. Later that year he was appointed city freight agent at that point and in 1938 was made traveling freight agent, with headquarters at Lincoln, Neb. He became grain agent at Omaha in 1940 and division freight agent at Burlington, Iowa, in 1941. In April, 1943, Mr. Deines was appointed acting general freight agent at St. Louis, Mo., becoming assistant freight traffic manager at Chicago in January, 1946, the position he held before his promotion.

John A. Carroll, traveling freight agent of the Atchison, Topeka & Santa Fe, at Ft. Madison, Iowa, has been advanced to division freight agent at Kansas City, Mo.

W. C. Higginbotham and **William M. McVeigh, Jr.,** assistant land and industrial commissioners of the Texas & Pacific at Dallas, Tex., have been promoted to assistant director of industrial development and industrial representative, respectively.

Harry W. Costigan, assistant general freight agent of the Great Northern at Seattle, Wash., will retire on April 30, after 50 years of service with the G. N. Advanced to succeed Mr. Costigan is **G. D. Johnson,** general agent at Seattle;

News Department continued on next left-hand page

ARE THESE DEVILS DOGGING YOUR DIESELS?

HEAT... PRESSURE...

SOOT... SLUDGE...

CONTAMINATION...

FRICTION...

WEAR... CORROSION...

DIRT...

We know them well— our experience can help you get rid of them!

You are the exception if some of these troubles don't dog *your* Diesels—cut into your schedules and profits. But whatever your problems, you can get real help in solving them from Socony-Vacuum.

Since 1898, when we lubricated Dr. Diesel's first engine, we have worked closely with builders and operators to increase Diesel efficiency. Recently, we developed new lubricating oils which embrace all the known desirable features for railroad operation. These oils are proving unusually effective *right now* on many major roads.

We believe that our long years of cooperative research and our new products can be of material assistance in keeping *your* Diesels on the job longer.

SOCONY-VACUUM OIL CO., INC., RAILROAD DIV., 26 Broadway, New York 4, N. Y.

SOCONY-VACUUM

GARGOYLE Railroad Lubricants

SOCONY-VACUUM

Correct Lubrication

WORLD'S GREATEST LUBRICATION KNOWLEDGE AND ENGINEERING SERVICE

Phillip F. Connelly, chief clerk in the refrigerator section of the freight traffic department at St. Paul, Minn., becomes assistant to general freight agent at Seattle.

E. H. Ahlers, traveling freight agent of the Wabash, with headquarters at Decatur, Ill., has been advanced to general agent, freight department, at Little Rock, Ark., succeeding the late **T. O. Chrismer.**

H. J. Flynn, general agent of the St. Louis Southwestern at Louisville, Ky., has retired. He is succeeded by **J. J. Waggener,** clerk-solicitor in the Louisville agency.

F. J. Conrad, whose promotion to freight traffic manager—system of the Chicago, Burlington & Quincy at Chicago, was reported in the *Railway Age* of March 4, was born on April 26, 1904, in Chicago, where he attended the public schools. In January, 1920, he entered railroad service with the Chicago, Rock Island & Pacific as mail clerk in the freight traffic department at Chicago. In 1922 he became a clerk on the standing rate committee, Western Trunk Line Committee, at Chicago, returning to the Rock Island's freight traffic department as general clerk at that point later in

F. J. Conrad

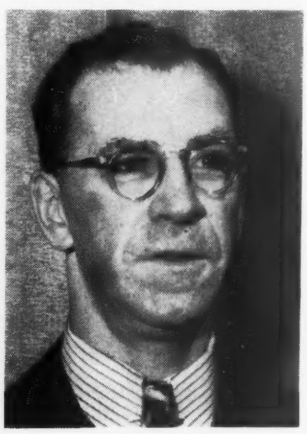
the same year. Mr. Conrad joined the Southern Pacific as rate clerk at Chicago in 1924, and from 1927 to 1928 served there as city freight agent. Subsequently he went with the Western Pacific as chief clerk at Chicago, being transferred to San Francisco, Cal., in 1931 as foreign freight agent. In 1935 he became foreign freight agent for the Burlington and four years later was appointed assistant freight traffic manager at Chicago. Mr. Conrad was promoted to freight traffic manager, Lines West, at Omaha in January, 1946, the post he held before his recent promotion.

MECHANICAL

W. E. Anderson, division general car foreman of the New York Central at Toledo, Ohio, has been appointed assistant master mechanic at Chicago. His former post has been abolished. **H. W. Rasor,** master mechanic at Chicago, has been given jurisdiction over the equipment department, including both locomotive and car departments, on the Toledo-West and Western divisions.

PURCHASES & STORES

T. A. Donovan, purchasing agent of the Canadian Pacific at Calgary, Alta., has been appointed assistant to general purchasing agent at Montreal, Que., effective May 1. **J. H. Baker,** assistant purchasing agent at Montreal, succeeds Mr. Donovan at Calgary. **W. W. Lummis** has been appointed assistant purchasing agent at Montreal, succeeding Mr. Baker. **J. F. Moriarty** has been appointed fuel purchasing agent at Montreal, succeeding **M. P. Foley,** who will retire on April 30, under the pension rules of the company, after 50 years of service.



T. A. Donovan

Mr. Donovan was born at Canterbury, N. B., on August 3, 1897, and attended St. Joseph's College at Memramcook, N. B. He entered railroad service in August, 1912, in the purchasing department of the C.P. at Calgary and was appointed chief clerk, purchasing department, at Montreal in October, 1928. Mr. Donovan became purchasing agent at St. John, N. B., in November, 1930, transferring to Toronto, Ont., in November, 1939, and to Calgary on January 1, 1947.

ENGINEERING & SIGNALING

R. W. Bailey, instrumentman on the Galena division of the Chicago & North Western, has been promoted to supervisor of scales and work equipment at Chicago.

John S. Parsons, division engineer of the Kent division of the Erie, at Marion, Ohio, has been promoted to assistant chief engineer—maintenance of way, with headquarters at Cleveland, Ohio. **R. J. Pierce,** division engineer of the Wyoming and Jefferson divisions, Dunmore, Pa., succeeds Mr. Parsons at Marion. The position formerly held by Mr. Pierce has been abolished and maintenance of way activities on the Wyoming and Jefferson divisions have been transferred to the jurisdiction of **R. H. Boykin,** superintendent at Dunmore.

SPECIAL

Dr. Alson R. Kilgore, chief surgeon of the Western Pacific at San Francisco, Cal., will retire on April 30, after 30 years of service. **Dr. Glenn F. Cushman,** local surgeon at that point, succeeds Dr. Kilgore.

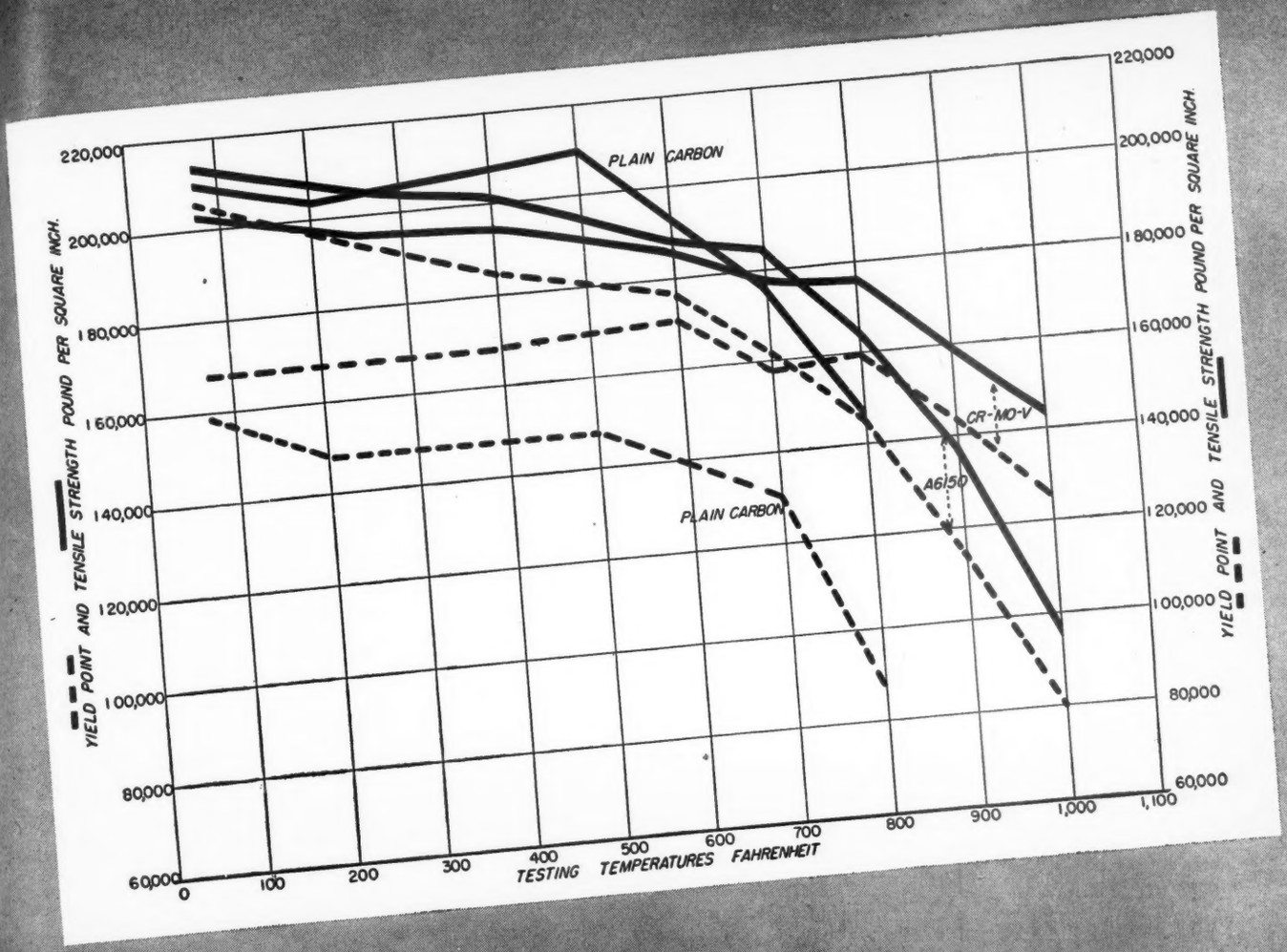
OBITUARY

Earl W. Thornton, editor of the Chicago & Eastern Illinois employees' magazine, "Flyer," died on April 10, at his home in Danville, Ill.

Carey Hosmer, assistant to the president of the Missouri-Kansas-Texas at St. Louis, Mo., died on April 12, at the Missouri Baptist Hospital in St. Louis, following a brief illness. Mr. Hosmer was born at Seymour, Tex., on September 26, 1891, and entered railroad service in August, 1906, as a messenger with the Katy at Atoka, Okla. He subsequently held a number of minor positions, and in 1917 became traveling auditor at Muskogee, Okla., being made agent at Atoka, the same year. From 1919 to 1928 he served as agent successively at Durant, Okla., Tulsa and Wichita Falls, Tex. He was later advanced to general agent at Dallas, Tex., and in September, 1931, was transferred to Kansas City, Mo. The following January he was appointed superintendent of terminals at Kansas City, becoming superintendent of the Northwestern district at Wichita Falls in March, 1944. Mr. Hosmer was promoted to assistant to the president in November, 1945.

T. O. Chrismer, general agent, freight department, of the Wabash at Little Rock, Ark., died on April 5, at Moberly, Mo.

Charles T. O'Neal, who retired in 1945 as president of the Chicago & Eastern Illinois at Chicago, died at Avon, N. Y., on April 15, at the age of 76. Mr. O'Neal was born at Brandywine Springs, Del., and received his early education in the Wilmington, Del., public schools and at Goldey College. He entered railroad service in 1894 as a transportation clerk with the Lehigh Valley, and served that road for 24 years as clerk, accountant, statistician, trainmaster, superintendent, general superintendent, marine manager and assistant vice-president. During World War I he served as a member of the labor division, Railway Board of Adjustment. In 1921 he was elected vice-president of the Fort Smith & Western (now part of the Kansas City Southern Lines) at Fort Smith, Ark., and served in that capacity until 1929, when he was elected vice-president of the Buffalo, Rochester & Pittsburgh (now part of the Baltimore & Ohio), at Rochester, N. Y. Mr. O'Neal became president of the C. & E. I. in January, 1931.



HIGH TEMPERATURE PROPERTIES

of Cr-V and Cr-Mo-V Spring Steels

SPRINGS FOR SERVICE at elevated temperatures require steels which resist softening and lowering of the yield point. Unless hardness and yield strength are stabilized by correct alloy additions to the steel, these properties deteriorate rapidly as the temperature is raised.

The chart above shows the yield point and tensile strength of three types of spring steel at elevated temperatures determined by standard short-time tension tests.

Springs of plain carbon steel are sometimes used at moderately elevated temperatures, although their lower yield values prevent them from giving service as satisfactory as that of the alloy spring steels.

Chromium-vanadium steel springs, such as AISI 6150, give better service at ordinary temperatures because of the higher yield point. In addition, they may be used at operating temperatures up to about 700° or 750° F because they retain high yield point values as the temperature is increased.

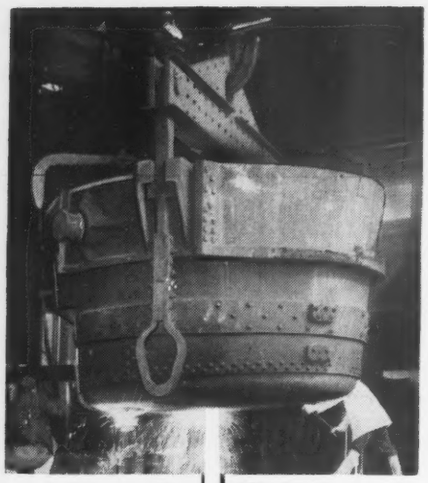
Chromium-molybdenum-vanadium steel was especially designed for springs operating at temperatures in excess of 750° F. It can be used for springs operating at temperatures as high as 850° F or even higher under some conditions. At 800° F, the yield point of this steel is still greater than that of plain carbon steel at room temperature.

If you have a problem in spring applications at elevated temperatures, our metallurgical engineers will be glad to help you solve it.

MAKERS OF ALLOYS — VANCORAM BRAND — CHEMICALS AND METALS

VANADIUM CORPORATION OF AMERICA

420 LEXINGTON AVENUE, NEW YORK 17, N. Y. • DETROIT • CHICAGO • CLEVELAND •



Get "Custom" Quality in

PRODUCTION STEEL CASTINGS

FOR

Railroad Equipment

Production castings at Continental are made with "custom" care and precision. Specialized foundry facilities accommodate all sizes of locomotive and carbuilders' castings to any physical properties. Heat treating and machining facilities provide all degrees of temper and finish. For dependable quality . . . strict observance of specifications . . . and scheduled delivery . . . Look to Continental first!

Continental
FOUNDRY & MACHINE CO.
Chicago · Pittsburgh
Plants at:
East Chicago, Ind.; Wheeling, W. Va.; Pittsburgh, Pa.

Current Publications

ARTICLES IN PERIODICALS

River Terminal Railway Company. Republic Reports, Winter 1950, pp. 4-6. Published by the Republic Steel Corporation, Cleveland 1, Ohio.

The River Terminal is a subsidiary of the Republic Steel Corporation in Cleveland, operating 22 mi. of track winding along the Cuyahoga river. Although small in size, it is, as its superintendent says, as wide as the biggest. It employs 400 people; claims to have been the first railroad in Cleveland to install a Diesel-powered locomotive and the first in that section of the country to install a radio-telephone communications system; repaired more than 7,000 cars requiring major overhaul in a recent year, and has an enviable safety record. In its approximately 50 years of operation, the line has grown from a little plant facility serving two furnaces to a successful enterprise which handles as many as 125,000 cars a month and is performing a helpful and indispensable service to industry in the lower Cuyahoga valley.

A Railroad Crusades for Forestry, by James B. Craig. American Forests, February, 1950, pp. 7-9, et seq. Published by the American Forestry Association, 919 Seventeenth st., N.W., Washington 6, D. C.

How the Seaboard Air Line pioneered for good forestry along its 4,150 mi. of line in six southeastern states stamps this carrier as a catalytic agent for sound conservation that serves as an example for railroads everywhere, according to Mr. Craig. The Seaboard, of course, is not alone among railroads in this concern over the future of forest lands, the article points out. An increasing number, with mounting interest in forest tonnage, their own wood requirements and community and regional stability and growth are employing foresters in varying capacities to further overall progress in conservation; but the Seaboard took the lead in establishing a forestry division back in the mid-thirties and has been in the forefront ever since, mainly in educational and extension work at the landowner level. It has conducted demonstrations of good cutting practices and cooperated with the lumber and pulp and paper mills in setting up their own forestry organizations and fire control programs. It has run a forest fire prevention train through the entire South and has sponsored a farm youth program worked out with the Future Farmers of America and with the help of the Southern Pulpwood Conservation Association and the state foresters. (See *Railway Age*, September 3, 1949, page 71, and September 6, 1947, page 52.)

The Fastest Trains, by H. E. Lobdell. Technology Review, 1950, pp. 149-155, et seq. Published for the Alumni Association of the M. I. T., Room 1-281, Massachusetts Institute of Technology, Cambridge 39, Mass. Single copies, 50 cents.

Continuing its series of articles on train speeds published in 1930 and 1940, the "Technology Review" surveys the increases in speed during the 1940's. There are tables showing the 10-year advance (1938-1948) in

Convenient

At Hotel Cleveland you'll be convenient to *anywhere* you'll want to go in Cleveland. Hotel Cleveland is directly connected to Union Passenger Terminal, garage, Terminal office buildings.

Comfortable

Quiet, sleep-inviting rooms—all with radio, many with television. Spirited, colorful new decorations in rooms and lobbies.

Friendly

There's a cordial, hearty welcome . . . gracious, attentive service to greet all who enter the friendly doors of Hotel Cleveland.

HOTEL CLEVELAND
Cleveland, Ohio

aggregate train mileages booked to operate daily in the United States from start to stop at 60, 70, and 75 m.p.h. and over; trains booked to operate daily in the U. S. from start to stop at 75 m.p.h. and over in October, 1949; representative fast railroad runs between metropolitan centers in the U. S. and Canada; and speeds of some of the British, French and European international runs.

Westinghouse Engineer, January, 1950. Published by the Westinghouse Electric Corporation, 306 Fourth ave., P. O. Box 1017, Pittsburgh 30, Pa. Price of this issue, 50 cents.

This issue is designated as a mid-century review and forecast of Westinghouse engineering, and contains articles on the ingredients of industry electrification; central-station steam-power generation, its past and its prospects; the gas-turbine; evolution and eventualities of a.c. power; switchgear developments and trends; research; important men of Westinghouse; the transformer and how it grew; development of transmission and distribution systems; industry's electrical drives in the twentieth century; light, yesterday and tomorrow; and electronics—prodigy of electrical science. It concludes with a chronology of Westinghouse engineering highlights of a half century.

TRADE PUBLICATIONS

Tri-Clad High-Speed Synchronous Motors. 8 pages, illustrations. Publication GEA-5426 of the General Electric Company, Schenectady 5, N. Y.

Lists applications of these motors, discusses their construction features and mechanical modifications, describes Tri-Clad protection, and gives three typical installation stories.

The Masterplate Iron-Clad Concrete Floor. 36 pages, illustrations. Published by the Master Builders Company, 7016 Euclid ave., Cleveland 3, Ohio.

Presents complete information on the Masterplate concrete floor, produced by embedding in the surface of the concrete, while still in plastic condition, Masterplate metallic aggregate to form an armored surface. The booklet discusses such qualities of the floor as its resistance to wear, corrosion and frictional sparks, its ability to disseminate static sparks, its non-dusting, non-slip and easy-to-clean features, and its economic advantages.

FILM

What's Your Safety IQ? 35-mm. sound slidefilm or 16-mm. sound motion picture. Produced by the National Safety Council, 20 North Wacker drive, Chicago 6. Available for purchase, preview or rental.

A new wrinkle in visual aids on safety—a film that asks questions—is the latest production of the N.S.C. A set of pictures showing safety hazards is screened for 12 to 15 sec. as the narrator asks: "What's wrong with this picture?" After a pause for audience reaction the narrator points out the hazards and tells what could be done to remove or avoid them. Among hazards considered in detail are those which cause railroad grade crossing accidents.

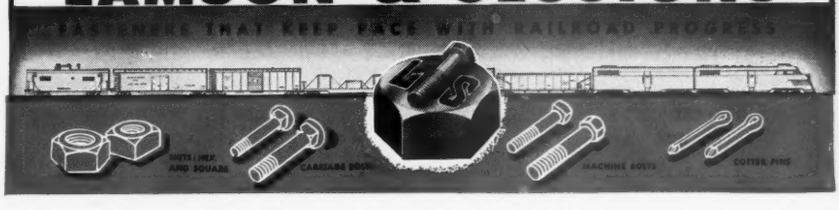
ON Cap Screws

Locomotive builders and railroad maintenance men know that modern "iron horses" are only as good as the fasteners that hold them together. That's why the "bolts" of yesterday have been replaced by modern, super-tough Lamson "1020" heat-treated Cap Screws. They're the fasteners that can handle the toughest holding jobs.

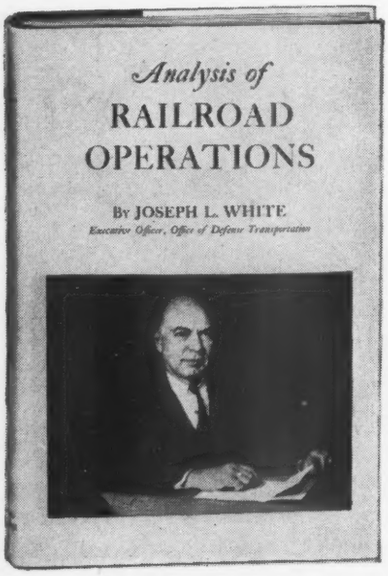
So remember this when you order Cap Screws. And remember, too, that Lamson "1020" heat-treated Cap Screws are the equal of original equipment *in every respect.* Lamson "1035", with 150,000 p.s.i. minimum tensile strength, offer you EXTRA holding power where required. They are the *ultimate* in high quality Cap Screws.

RAILROAD SALES DEPARTMENT
THE LAMSON & SESSIONS CO.
General Offices: 1971 West 85th St., Cleveland 2, Ohio
Plants at Cleveland and Kent, Ohio • Birmingham • Chicago

LAMSON & SESSIONS



A Guide for the Interpretation of Railroad Statistics



2nd Ed. 324 pages, 87 illus., 29 tables, 5 charts, index, 6 x 9, cloth, $5.00

Analysis of RAILROAD OPERATIONS

By JOSEPH L. WHITE
Formerly Executive Officer, Office of Defense Transportation

This book is a guide through the intricacies of railroad accounts. It is the only authoritative work on the interpretation of operating statistics. It shows how to analyze the figures so as to determine whether a department is being operated efficiently and whether operations for the railroad as a whole are on a profitable basis.

Without going into the details of accounting procedure the accepted methods of interpreting statistical data are clearly set forth. Each chapter delves into an intricate phase of railroad accounts or statistics, analyzes its meaning and points out its significance in relation to net operating results. In the final chapter a comparative analysis is made of the operating results of two large railroads based on their reports to the Interstate Commerce Commission which are available to the public. One is a steam railroad which derives most of its operating revenues from heavy freight traffic. The other is partly electrified and earns a large revenue from passenger traffic.

"The work should be interesting and useful to anyone who undertakes to study and interpret railroad reports and statistics—particularly railroad executives, investment analysts, and economists."—*The New York Certified Public Accountant.*

"From these data the author suggests methods by which the analyst may compare one operation with another, or the operation of one period with operations in another period, or diagnose the symptons of efficiency or inefficiency or of favorable or unfavorable characteristics which are revealed by these data. The method is useful for both quantitative and qualitative analysis, and for past, present and future periods."—*The Annals of the American Academy.*

A Complete Guide

For the inexperienced this book tells where to begin, where to find the information wanted and how to compile it. The experienced analyst will find in it many helpful hints and short cuts. Railroad executives and operating officers as well as department heads who may be called on to explain accounting figures reflecting on departmental activities, will find in it information they need. Railroad economists and statisticians can make use of the methods outlined.

Contents

Introduction—General Principles of Railroad Accounting—The Income Statement — Railway Operating Statistics — Railway Operating Revenues—Statistics of Freight and Passenger Service—Causes of Fluctuations in Operating Revenues—Railway Operating Expenses—Relation of Expenses to Revenues—Maintenance of Way and Structures—Unit Cost of Maintaining Road Property—Maintenance of Equipment—Account 314, Freight Train Cars-Repairs—Unit Costs of Maintaining Equipment—Budgetary Control of Maintenance Expenses—Transportation and Miscellaneous Operations—Unit Costs of Operation—Statistics of Utilization of Equipment—Control of Transportation Expenses Through Current Reports—Traffic and General Expenses, Taxes and Rents—Analysis of Actual Operations of Two Class I Railways in 1941—Appendix A: The Accomplishments of the United States Railroad Administration in Unifying and Standardizing the Statistics of Operation, by William J. Cunningham, Assistant Director of Operation, United States Railroad Administration (1919). Appendix B: Pictorial Summary of the Principal Sources of Railway Revenues and the Causes of Expenses as Recorded in the Accounts.

FREE EXAMINATION OFFER

Simmons-Boardman Publishing Corporation
30 Church Street, New York 7, N. Y.

Please send postpaid on Ten Days' Free Examination a copy of the Second Edition of ANALYSIS OF RAILROAD OPERATIONS by White. If satisfactory I will remit the list price of $5.00. Otherwise I will mail back the book without obligation.

Name .....

Address .....

City ..... Zone ....State.....

Company .....Position .....

(This offer is limited to retail customers in the United States) R. A. 4-22-50